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FM 1-15

DEPARTMENT OF THE ARMY FIELD MANUAL

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AVIATION BATTALION

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AVIATION BATTALION

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* This manual supersedes FM 1-15, 13 December 1961.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Purpose and Scope

a. This manual provides doctrine and guidance for the employment and operation of the aviation battalion. It discusses the mission, organization, capabilities, limitations, and internal operations of the battalion as well as its relationship to supported units.

b. Although this manual is based upon aviation battalions organic to armored, infantry, infantry (mechanized) and airborne divisions, it is generally applicable to all type aviation battalions. Significant differences between divisional and nondivisional units are discussed. Users who are interested in specific organizations should use the appropriate tables of or-

ganization and equipment (TOE) in conjunction with this manual.

c. The material contained herein is applicable to nuclear and nonnuclear warfare.

2. Recommended Changes

Users of this manual are encouraged to submit recommended changes or comments to improve the manual. Comments should be keyed to the specific page, paragraph, and line of text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded directly to the Commanding Officer, United States Army Combat Developments Command Aviation Agency, Fort Rucker, Ala. 36362.

Section II. ORGANIZATION, MISSION, AND EMPLOYMENT

3. Organization

Aviation battalions are organized to provide aviation support to other Army units. A battalion may be composed of a fixed number of subordinate units (divisional battalion) or it may consist of a headquarters company to which two or more subordinate units are attached (nondivisional battalion).

4. Divisional Aviation Battalion

The divisional aviation battalion consists of a headquarters and headquarters detachment, an airmobile company (light), and an aviation general support company.

a. *Headquarters and Headquarters Detachment.* The headquarters and headquarters detachment is organized to provide command, control, administration, communications, and supply for the aviation battalion, plus aviation

special staff personnel for the division headquarters.

b. *Airmobile Company (Light).* The airmobile company (light) is organized to provide air movement of personnel and supplies in support of division operations.

c. *Aviation General Support Company.* The aviation general support company is organized to provide aviation support for the division headquarters, division support command, and other units without organic aircraft.

5. Nondivisional Aviation Battalion

Army aviation units located at corps and field army may function as individual companies or they may be organized into battalions. These units either provide aviation general support for the particular level to which they are assigned, or perform missions as corps and army aviation support for combat divisions.

6. Mission

a. A divisional aviation battalion provides aviation general support to the division, particularly those units which do not have organic aviation, and reinforces other divisional aviation elements as required.

b. The mission of a nondivisional aviation battalion depends largely upon the type and composition of the battalion and the capabilities of its subordinate units.

7. Capabilities and Limitations

a. *Capabilities.* The aviation battalion is capable of operating throughout the spectrum of warfare, from cold war to general war. It provides a means of supplementing the land battle functions of intelligence; mobility; force/firepower; command, control, and communications; and service support.

b. *Limitations.* The aviation battalion has limited ability to defend itself while performing operations. It is further limited by its large requirement for aviation fuel, its sensitivity to adverse weather conditions, and its vulnerability to overpressures caused by nuclear explosion.

8. Employment

a. *General.* The aviation battalion is designed to provide aviation support to Army forces in the combat zone. It has the ability to overcome a variety of obstacles to the movement of ground combat elements of divisions, corps, and special action forces, and contributes to the mobility and maneuverability of those forces in offensive actions. In defense, retrograde, denial, or counterinsurgency operations, an aviation battalion can help impede the progress of enemy or guerrilla ground forces by providing timely intelligence, delivering troops and supplies to sustain positions held by friendly elements, and by blocking critical avenues of approach. The efficient employment of an aviation battalion is accomplished when its capabilities are used with those of the supported organization to provide a balance among the land combat functions.

b. *Command Relationship.* The command relationship established between the ground unit

and the supporting aviation unit depends upon the mission or degree of control directed by the higher headquarters. The degree of control depends on the capability of the ground unit to plan, coordinate, control, and logistically support the aviation unit. Normally, an aviation battalion or an element thereof is controlled by its parent unit and is placed in support of the ground unit, with operational control of both units retained by the headquarters which directs and supports the operation. An exception is the airmobile assault, the nature of which normally necessitates placing the aviation unit under operational control of the airmobile force commander.

c. *Factors Effecting Employment.* Factors affecting employment of an aviation battalion include—

- (1) Mission of the ground combat force.
- (2) Plan of maneuver of the ground combat force and its mobility requirements.
- (3) Number and type of aviation units available.
- (4) Capabilities of aviation units.
- (5) Availability of airfield and bivouac areas.
- (6) Availability and suitability of aviation support from other services.
- (7) Availability and expected expenditure of aviation petroleum, oils, and lubricants (POL).
- (8) Enemy intelligence, particularly the air defense capability.
- (9) Operational agreements relating to counterinsurgency areas.
- (10) Weather.
- (11) Terrain.

d. *Divisional Aviation Battalion.* The structure of the aviation battalion of the armored, infantry, and mechanized divisions is the same; each includes a headquarters and headquarters detachment, an aviation general support company, and an airmobile company. The airborne division aviation battalion is similar in overall organizational structure to those in other divisions, but is equipped and staffed somewhat differently to satisfy the specialized needs of that division. The battalion normally is not employed as a unit. Elements of the

battalion are attached to, placed under the operational control of, or placed in support of other units of the division. The headquarters and headquarters detachment normally is located with the aviation general support company at the division instrumented airfield. The airmobile company (light) is usually employed as a unit, but can be tailored into smaller elements to fit the situation. This company operates from its own dispersal area. It should be located so that it can obtain adequate air traffic regulation and terminal air support from the main instrumented airfield. When the requirement for aviation support within the division exceeds the capability of the divisional aviation battalion, additional aviation support

can be provided from nondivisional aviation resources of higher headquarters. Aviation units attached to the division may be further attached to the division aviation battalion when their mission necessitates close control by that echelon.

e. Nondivisional Aviation Battalion. A non-divisional aviation battalion is employed in a manner similar to that of a divisional aviation battalion. Normally, it operates from its own dispersal area on a mission type basis within established priorities. Units may operate directly under the corps or field army to which assigned or may be attached to, or placed in support of, subordinate elements for specific missions.

CHAPTER 2

COMMAND AND STAFF

Section I. COMMAND

9. General

The aviation battalion commander must thoroughly understand the tactical and technical employment of his unit, and the operations and employment of supporting or attached units. The commander is responsible for everything the battalion does or fails to do. He makes decisions and issues orders through the use of the chain of command. Through this chain the commander exercises his authority and promotes continuity throughout the battalion by prescribing policies, assigning missions, and designating tasks for units under his control. Effective operation of this chain requires that sufficient authority be delegated to enable subordinates to accomplish tasks for which they are responsible. The commander conducts personal visits and inspections to insure that his standards are understood and satisfactorily maintained.

10. Commander's Responsibilities as Aviation Staff Officer (Division)

The commander of the division aviation battalion is assigned the additional duty of division aviation officer. In this capacity he is responsible for informing and advising the division commander and staff on the technical aspects of aviation and the employment of elements of the battalion. In addition he—

a. Maintains liaison with aviation staff officers of higher and lower headquarters and with adjacent units.

b. Prepares and supervises the aviation portion of the division training program and provides technical supervision of aviation training for other elements of the division.

c. Supervises the employment of aviation elements assigned or attached to the division

for tactical operations. He exercises operational control over these units except when operational control is specifically delegated elsewhere by the division commander.

d. Prepares the aviation portions of division estimates, plans, orders, and reports.

e. Provides initial planning assistance to the airmobile force commander for the preparation of the aviation portion of air movement plans.

11. Assistant Aviation Officer (Division)

An assistant aviation officer is authorized in each divisional aviation battalion. He is located at the division tactical operations center (DTC) and is the principal representative of the division aviation officer on the division special staff. Normally, he is charged with the responsibility of supervising the Army aviation element (AAE) of the DTC for the division aviation officer (battalion commander) and, as directed, performs those duties of the division aviation officer noted in paragraph 10. He keeps abreast of the division tactical disposition and future plans, and advises the division aviation officer on these matters. Although his specific duties vary depending on the desires of the division aviation officer, he normally prepares pertinent annexes to division operations orders, administrative orders, estimates, plans, and reports.

12. Command/Staff Relationships

The staff is responsible to the commander for acquiring information; making recommendations; preparing estimates, detailed plans, and orders implementing command decisions; and coordinating plans and operations. The commander maintains close relationship with

his staff officers and keeps them fully informed. He establishes definite functional responsibilities for his staff, delegates authority commensurate with responsibilities, and charges the executive officer with responsibility for directing and coordinating the staff.

13. Command Relationship with Subordinate Unit Commanders

The battalion commander's relationship with the commanders of organic and attached units is direct and personal. He encourages them to work with his staff and to deal directly with him when appropriate. He makes formal and informal visits to subordinate units, including attached units, to gain direct knowledge of the unit situation and the status of the troops operating with the battalion. The commander insures that adequate communications and liaison are maintained to keep commanders of supporting and supported units informed of the current situation and the support needed or available. The supporting unit is required to establish communications with the supported unit. If a conflict arises, the supporting unit initiates compliance, concurrently referring the matter to its parent headquarters. The commander of the supporting unit advises the commander of the supported unit of his unit's capabilities and limitations. He recommends the method of employing his unit as a staff advisor to the supported unit.

14. Command During Operations

a. The aviation battalion commander formulates plans, issues orders, and supervises the operations of all units organic to the battalion or under his operational control. He takes action to obtain additional personnel, equipment, or other support required to accomplish the mission. He coordinates the activities of his unit with those of adjacent, higher, and lower units.

b. The commander goes where he can best direct, control, and influence the operation. He may be with the command group element, at his

command post (CP), in an aerial command post, or anywhere in the area of operations where his presence is required. Before departing the command post, he informs his staff on plans to be made or actions to be taken if the situation changes. When he is away, he insures that he can communicate with the command post and subordinate commanders. While away from the command post, if he issues orders or obtains pertinent information on the situation, he informs his staff without delay.

15. Troop Leading Procedure

Troop leading is a major function of command. Every commander, regardless of echelon, makes plans and leads troops. Time, equipment, and personnel must be used to best advantage. The degree, sequence, and actual steps involved in this function may vary, or be stressed, depending upon the mission and the commander's personality. Regardless of the technique used, the commander must make an estimate of the situation and he must allow his subordinates maximum time for planning. Upon receipt of a mission, the commander—

a. Analyzes the mission and determines tasks necessary to accomplish the mission.

b. Issues warning order to his staff and to organic and attached unit commanders. The warning order contains as much pertinent information as is available.

c. Begins his estimate of the situation to include a map study.

d. Issues planning guidance to his staff.

e. Makes a tentative estimate of the situation.

f. Receives staff recommendations.

g. Makes his decision and issues the concept of operation.

h. Based upon the concept of operation, makes a personal reconnaissance (air and/or ground) and coordinates with supporting and supported units as required.

i. Approves or revises the plan of operation.

j. Issues orders.

k. Supervises the operation.

Section II. AVIATION BATTALION STAFF

16. General

a. The battalion staff consists of the executive officer, battalion staff officers, special staff officers, and the sergeant major.

b. Staff officers assist the battalion commander in the exercise of command. They transmit the commander's orders to subordinate units and relieve him of time-consuming details. Through coordination with the Army aviation element of the tactical operation center, the staff maintains information pertaining to—

- (1) Location, current and projected availability, and current and projected use of organic, assigned, attached, and supporting units.
- (2) Status of logistics and administration. Based upon this information, the staff makes recommendations to the commander. When a decision is made, staff members assist in the preparation of orders and supervise their implementation.
- (3) Capabilities, strength, location and composition of enemy forces.

c. The successful functioning of the staff depends upon close coordination among its members and among the staff members and units of the command. This coordination includes teamwork with staffs of higher headquarters and supporting units. Conferences and personal contact promote coordination and cooperation. Staff officers must know the duties and responsibilities of other members of the staff so that they may assume such duties in case of emergency. The staff should be organized to operate on a 24-hour basis.

d. A staff officer must remember that he is not the commander of the battalion subordinate units; he acts only in the name of the commander for whom he works. Staff officers visit subordinate units to gain current knowledge of unit situations and administrative conditions. Commanders or their representatives are contacted personally as the first and last steps of each visit. Conditions which are contrary to policies are called to the attention of unit commanders. Details not requiring a com-

mand decision may be settled with the unit commander at the time of the visit. Concise reports of facts are provided the battalion commander following such staff visits.

e. FM 101-5 contains details of staff officer functions.

17. Relationships of Battalion Staff Officers to Special Staff Officers and Subordinate Commanders

a. The battalion staff officers are the executive officer, S1, S2, S3, and S4. Battalion staff officers insure that the special staff is informed on plans, policies, and decisions of the commander. They obtain information, estimates, and recommendations from the special staff and subordinate commanders and use this data in preparing reports, estimates, recommendations, and plans for the commander. All staff officers keep each other informed on matters of mutual interest.

b. A special staff officer makes recommendations directly to the commander. The special staff officer should inform the appropriate staff officers of the information exchanged when it affects their field of interest.

c. Subordinate commanders are afforded direct contact with the commander. When time permits, the commander will call upon leaders of organic and attached units for estimates and recommendations pertaining to their units. The commander uses this information together with data from his staff as the basis for estimates and decisions.

18. Executive Officer

The executive officer is the principal assistant and advisor to the battalion commander. Although his specific duties vary depending on the desires of the commander, he normally performs duties similar to those of the chief of staff at the general staff level. The executive officer is charged with the responsibility for execution of staff tasks, the efficient and prompt response of the staff, and the coordinated effort of staff members. He transmits the commander's decisions to the staff sections and to subordinate units, when applicable, in

the name of the commander. He keeps abreast of the situation and future plans and acts for the commander in his absence. He is prepared to assume command of the battalion at any time. Normally, the executive officer is located at the command post and is responsible for its efficient operation. He and the commander should not be absent from the command post at the same time. In the displacement of the command post, the executive officer usually closes the old command post and moves with the last echelon of the headquarters.

19. Adjutant (S1)

The adjutant (S1) performs the functions of the G1 of the general staff type organization, the functions of the secretary of the general staff, the functions of the commander's personal staff, and the personnel functions of special staff officers who are not assigned in the battalion staff, such as the adjutant general, inspector general, judge advocate, provost marshal, and special services officer (FM 101-5). Specifically, the adjutant (S1)—

a. Consolidates and forwards information on the assignment, promotion, transfer, retirement, and discharge of personnel.

b. Processes awards of decorations, citations, commendations, and other honors.

c. Processes applications for leave.

d. Maintains records and current information on military justice including Article 15 punishments, processes and reviews court-martial (CM) charges and records of trial by inferior courts-martial for administrative correctness, and recommends to the commander measures to improve discipline.

e. Maintains current information on strength to include loss estimates and casualty records. He makes arrangements for receiving, processing, assigning, and quartering replacements.

f. Sets up internal arrangement of the command post, consolidates data submitted for inclusion in the unit standing operating procedures (SOP), and maintains the SOP which governs unit and command post operating procedures.

g. Is responsible for the collection, processing, and evaluation of prisoners of war.

h. Is responsible for postal and message center services.

i. Publishes and authenticates orders and instructions of the commander, except combat orders.

j. Supervises athletics, entertainment, and other morale-building activities when no other officer is designated for such duties.

k. Is responsible for all administrative matters not assigned to another staff officer.

l. Commands the headquarters detachment in the divisional battalion (para 39 and 40).

m. Exercises staff supervision over the battalion personnel section (nondivisional battalion).

n. Acts as administrator of civilian services, providing liaison with civilian employers and the local government in the affairs of the camp and its personnel in a counterinsurgency operation.

20. Intelligence Officer (S2)

The intelligence officer (S2) performs the functions of G2 of the general staff type organization (FM 101-5). He is primarily responsible for advising the commander, staff, subordinate units, and other interested agencies on the terrain, weather, and the enemy situation and capabilities. Specifically, the S2—

a. Obtains and disseminates information on the terrain and weather.

b. Supervises and trains battalion intelligence personnel, and exercises control over them during operations.

c. Plans and supervises intelligence and counterintelligence training for all personnel of the battalion.

d. Prepares the battalion intelligence plan and informs the G2 of its intelligence requirements.

e. Briefs and debriefs flights personnel.

f. Records pertinent enemy information and physical hazards to flight on the situation map.

g. Receives and forwards to higher headquarters information collected by elements of the battalion.

h. Disseminates intelligence received from higher headquarters to the commander, staff, and subordinate elements.

i. Requests and supervises distribution of maps, airphotos, image interpretation reports, and photomaps.

j. Monitors surveillance and target acquisition missions between the division G2 and the general support company of the divisional aviation battalion.

k. Works with indigenous military and civilian staffs and intelligence gathering agencies in a counterinsurgency environment.

21. Operations and Training Officers (S3)

The operations and training officer (S3) performs the functions of the G3 on the general staff type organization (FM 101-5). He is primarily responsible for advising the commander on organizations, training, and operations. Specifically, the S3—

a. Prepares recommended changes to tables of organization and equipment and recommends attachment or support of units which will facilitate the accomplishment of the mission.

b. Assigns priorities for unit personnel requirements (coordinating with the S1).

c. Prepares and has staff supervisory responsibility for the execution of training directives, programs, orders, field exercises, and maneuvers based on plans approved by the commander.

d. Selects training areas and ranges, and allocates training aids and equipment.

e. Prepares the program of instruction and organizes and supervises schools for the battalion to include individual and unit flight training programs.

f. Makes training inspections, and prepares and supervises training tests based on Army training tests (ATT).

g. Informs his commander and other staff officers on the situation and makes recommendations on the employment of the battalion.

h. Supervises the posting of friendly unit dispositions on the situation map.

i. Recommends the general location of organic and attached units and their employment.

j. Coordinates with the communications officer in the preparation of the signal communications plan.

k. Plans tactical movements, including units involved, formation, and type of transportation required (coordinating with S4). He prepares the movement order and march tables after the plan of movement is approved.

l. Prepares the battalion operation order for the commander's approval. He coordinates with the S1, S2, and S4 for their input to the order. If the operation order is given verbally by the commander, the S3 writes a complete order, often in pencil form, and files it.

m. Prepares plans for future and contingency operations.

n. Recommends to the S1 and S4 priorities for allocation of administrative and logistic support to subordinate units.

o. Implements civil affairs functions delegated to the battalion.

p. Prepares and maintains necessary records and reports.

q. Coordinates with the S4 to determine the status of the materiel readiness program.

r. Coordinates operations and plans with indigenous military staffs and their advisors for counterinsurgency operations.

s. Prepares security and defense plans for the installation in a counterinsurgency operational environment.

t. Prepares the battalion field SOP in coordination with other staff officers.

22. Logistics Officer (S4)

The logistic officer (S4) has staff responsibility for planning, coordinating, and supervising the operation of the logistical facilities of the battalion. He insures that organic and nonorganic administrative service support elements adequately support the plans of the command and that they function according to the orders of higher commanders. The duties of the S4 are similar to those prescribed for the G4 of the general staff type organization (FM 101-5). Specifically, the S4—

a. Coordinates with higher headquarters logistics officers, appropriate support command, or supporting supply unit on supplies for the battalion. He also determines the supply requirements of organic and attached units.

b. Coordinates priorities of issue as established by higher headquarters and the S3.

c. Supervises procurement and distribution of supplies (divisional battalion only).

d. Keeps subordinate units informed of the location of the logistical installation.

e. Coordinates with the maintenance battalion commander and the commander of the supporting transportation aircraft direct support company on maintenance, repair parts supply, evacuation, and technical assistance requirements.

f. Coordinates the evacuation of damaged equipment and weapons, salvage, and captured enemy material (FM 54-2).

g. Coordinates additional transportation services required for the battalion.

h. Coordinates with the S3 to determine the status of the materiel readiness program.

i. Prepares the battalion logistical plan and the logistical portion of operation orders.

j. Coordinates the evacuation of casualties including patients.

k. Supervises the upkeep of the camp or installation and its facilities, and operates much as a post engineer when the battalion is deployed in a semistatic position, as in a counterinsurgency operational environment.

23. Special Staff

a. *General.* Special staff officers normally have knowledge and/or training in special areas included in, but more specialized than, the broad fields of interest of the battalion staff officers and largely relating to technical, administrative, and branch matters. Special staff officer activities may be directly supervised by the battalion executive officer or by the staff officer having primary interest in the field of the special staff officer's activities. This decision is left to the commander whose primary concern is to gain a working relationship among the staff that insures continuity of effort without creating unnecessary links in the chain of communications.

b. *Surgeon.* The surgeon is a medical officer qualified as a flight surgeon; he is assigned to the battalion headquarters under the staff supervision of the S1. He has direct access to the commander; however, he works closely with members of the medical battalion staff in matters directly affecting the health of the command, medical care of troops, and the proper employment of medical personnel, equipment, and supplies. In a counterinsurgency situation, the surgeon can initiate a military civic action program by providing medical services, dispensary facilities, advice to local doctors, and possibly an airmobile visiting dispensary. Within the battalion, the surgeon exercises operational control over the medical section. In the divisional aviation battalion, he performs these duties as the division aviation medical officer for all organic division and attached aviation units. Specifically, the aviation battalion surgeon—

- (1) Maintains the aviation medical program and insures that all rated aviation personnel in the battalion are physically qualified for flight missions.
- (2) Prepares a battalion medical plan based upon higher headquarters medical plan and the situation.
- (3) Recommends a site for location of the battalion aid station, supervises its operations, and supervises the care and treatment of patients.
- (4) Develops policies and procedures concerning medical functions to include the supervision of training troops in sanitation and first aid.
- (5) Requisitions medical supplies and equipment from the division medical battalion or nearest medical unit with this support capability.
- (6) Examines foodstuffs and water to determine suitability for consumption after exposure to chemical, biological, or radiological agents.
- (7) Supervises the evacuation of patients to the battalion aid station.
- (8) Prescribes treatment procedures and insures that facilities for treatment

of chemical and biological warfare patients are available.

- (9) Insures that emergency medical equipment and supplies are provided to battalion personnel as required.
- (10) Maintains a preventive medicine program to preserve maximum individual and unit efficiency.
- (11) Arranges evacuation for those patients requiring treatment beyond the capability of the battalion aid station to the next level of medical treatment.
- (12) Serves as a member of aircraft accident investigation and flight evaluation boards.
- (13) Formulates, coordinates, and supervises all medical aspects of the aviation safety program with appropriate commanders and staff officers.

c. Signal Officer. The signal officer supervises the communication section and, as a special staff officer, coordinates and exercises technical supervision over the training and activities of communications personnel throughout the battalion. He prepares, plans, and makes recommendations for the employment of signal communications to include ground and aircraft communications system. Specifically, the signal officer—

- (1) Supervises the installation of radio, wire, and terminal flight and control facilities at the battalion instrumented airfield.
- (2) Coordinates with appropriate flight operations center (FOC) and flight coordinating centers (FCC) on pertinent communications matters.
- (3) Coordinates with the S1, who selects the location for the command post.
- (4) Coordinates with S2 on communications security measures.
- (5) Obtains current signal operating instructions (SOI) and standing signal instructions (SSI) from higher headquarters. He prepares and distributes extracts of SOI and SSI.
- (6) Prepares the communication portion of the battalion SOP.

- (7) Submits recommendation for paragraph 5 of the operation order and for signal annexes when required.
- (8) In coordination with the S4, plans and supervises matters pertaining to signal supply plans and supervises matters pertaining to signal supply and maintenance.
- (9) Supervises the installation, operation, and maintenance of the signal equipment issued to the communications section and the battalion headquarters.
- (10) Procures, stores, and distributes codes, ciphers, and cryptographic material.

d. Maintenance Officer. The maintenance officer supervises the maintenance section and, as a special staff officer, advises the battalion commander on capabilities of operating unit's organizational maintenance sections to meet current and projected workloads. He advises the staff and subordinate commanders within the command on the technical aspects of aircraft, vehicle, and equipment operations and maintenance. He maintains liaison with the supporting maintenance and supply units and with the operating units of the aviation battalion to assure an effective direct support maintenance schedule. He coordinates his activities with the S4 and keeps him advised on the maintenance status within the battalion. Specifically, the maintenance officer—

- (1) Has staff supervision for inspection and administers technical guidance for all organizational maintenance performed within the battalion.
- (2) Provides staff supervision over the performance of airfield services at the aviation battalion airfield (divisional).
- (3) Supervises the operations of the battalion motor maintenance technician.
- (4) Furnishes staff supervision for the receipt, issue, stockage, storage, and turn-in of repair parts and equipment (divisional). Nondivisional battalion maintenance officers monitor subordinate units in these actions.
- (5) Monitors and has staff supervision for the preparation of maintenance rec-

ords, schedules, and reports of subordinate units.

e. Aviation Safety Officer. The aviation safety officer advises the battalion commander, staff, and subordinate units on safety aspects related to their individual functions with particular emphasis on aviation safety. He receives and disseminates safety directives or programs from higher headquarters, and implements and supervises the battalion safety program in accordance with Army directives. In the division aviation battalion, he may be designated as division safety officer, under the staff supervision of the division aviation officer, for all organic division and attached aviation units. During field operations, he is located in the DTOC with the assistant division aviation officer. Specifically, the aviation safety officer—

- (1) Reviews, monitors, and maintains records and statistics of accident or incident reports to detect trends and recommend corrective measures.
- (2) Prepares and monitors the battalion safety program for accident prevention.
- (3) Prepares training programs for accident investigation boards and teams (in coordination with S3) and advises board members during an investigation.
- (4) Advises staff members on inclusion of safety information in battalion directives, policies, programs, and training.
- (5) Inspects aviation battalion headquarters and subordinate units to determine the status of accident prevention within the battalion.
- (6) Conducts surveys of unit airfields and facilities to insure that they meet the designated operational and safety requirements.
- (7) Reviews aviator flight records and unit training programs to insure that training is directed to known deficiencies.
- (8) Insures adequate distribution of flight safety literature to organic division and attached aviation units.

(9) Informs the commander of unsafe conditions that exist within the organization and recommends corrective actions.

(10) Prepares the battalion preaccident plan in coordination with other unit members and outside agencies.

f. Chaplain. The chaplain is authorized in the nondivisional aviation battalion. Specifically, the chaplain—

- (1) Advises the commander and staff on all matters pertaining to religion, morals, and morale as affected by religion.
- (2) Provides religious services, including sacraments, ordinances, rites, and funeral services.
- (3) Assists in implementing the command character guidance program.
- (4) Counsels military personnel and their dependents as required and corresponds with relatives of deceased personnel.
- (5) Prepares reports on religious activities of the command and prepares estimates of funds for their support.

g. CBR Officer. The battalion commander may appoint an officer to act as the chemical, biological, and radiological (CBR) officer for the battalion. The CBR officer, assisted by the chemical NCO, is the advisor for the battalion on chemical, biological, and radiological operations. The CBR officer, to include the NCO as appropriate—

- (1) Assists the battalion S2 in the collection, processing, and dissemination of CBR intelligence information to include radiological survey control party duties (FM 3-12); effective use of wind messages, fallout prediction messages, and nuclear, biological, and radiological reports as appropriate; enemy CBR materiel; and CBR contamination data.
- (2) Assists the battalion S3 on chemical, biological, and nuclear defense plans and operations to include preparation of the CBR and nuclear defense annexes to the battalion SOP, the

training of unit CBR teams, determination of radiological time of entry and time of stay calculations, computation of the battalion radiation dose, preparation of the CBR portion of the master training schedule, the inspection of all CBR training, and the selecting of individuals for CBR school training.

h. Liaison Officer. The liaison officer is the commander's personal representative to the unit with which liaison is established. He must be thoroughly familiar with the situation and plans of his own unit and with the policies of his commander and make such information available to the commander and staff of the visited unit. He familiarizes himself with the situation and plans of the unit to which he is sent and secures and transmits desired information to his own unit.

i. Sergeant Major. The sergeant major is

the senior noncommissioned officer in the battalion. He acts as the commander's representative in dealing with other noncommissioned officers and advises the commander in enlisted personnel matters. He exercises no command prerogative; however, he is expected to make on the spot corrections. Specifically, the sergeant major is concerned with soldierly appearance, conduct, and discipline within the organization with emphasis on those qualities in noncommissioned officers. He establishes direct contact with subordinate first sergeants and staff section sergeants, and holds periodic meetings with them to disseminate information and instructions from the commander. He accompanies the commander on visits and inspections and at ceremonies. When directed, he actively assists in the investigation of any charges involving noncommissioned officers, and functions as a member of any board pertaining to noncommissioned officers. He works very closely with the adjutant (S1).

Section III. COMMAND AND CONTROL FACILITIES

24. Command Post

a. The direction and control of battalion operations is exercised primarily through the battalion command post. The command post maintains communications with higher, adjacent, supporting, supported, and lower units (including indigenous forces as appropriate). Personnel normally at the command post include the battalion commander, battalion staff, necessary special staff officers, liaison personnel, and supporting personnel. Operation and displacement of the command post are prescribed in the unit SOP.

b. The activity of the command post is centered around the S2/S3 staff. The executive officer supervises command post operations and insures that sufficient officer and enlisted assistants who are familiar with the situation and the operations-intelligence center are on duty at all times. Frequently, the commander and the S3 will be away from the command post to maintain a more personal contact with subordinate aviation units or higher headquarters. Other staff officers may also be away to properly supervise their areas of interest. At

such times, personnel of the command post will continue to maintain a complete status of operations and will inform the commander and staff of information received and transmitted.

c. Although the command post is the central control point for the battalion, not all plans and decisions are made there. The commander assures that sufficient communication means are available to permit operations on the move. The command group (para 25) maintains communications and control while the main part of the command post moves.

d. The battalion commander orders the command post displaced whenever necessary to insure security or continuous responsive aviation support to the user. For details on displacement, see chapter 3.

25. Command Group

a. A command group is a subdivision of the forward echelon containing certain key staff officers and personnel who usually accompany the commander. This group enables the commander to operate away from his command post in order to maintain a personal knowledge of the situation, exercise personal leader-

ship, and closely control the operation. The command group has no fixed organization, but consists of the commander and selected personnel and equipment for a given situation. It may include the S3, signal officer, maintenance officer, liaison officer, and communications personnel and necessary ground vehicles, aircraft, and command radio facilities. Sufficient command radio facilities are required to enable the command group to contact the command post, supported units, and subordinate units of the battalion as necessary.

b. There is no prescribed requirement for using the command group. This depends upon the commander's personality and the operational requirement. The means of transportation varies with the situation. If aircraft are available (particularly during large scale airmobile operations), the commander may operate from an aerial CP. He may divide the command and control facilities between operation on the ground and in the air.

26. Alternate Command Posts

Battalions prepare plans and train personnel to continue command and control in the event the battalion command post is rendered inoperative. Normally, a CP of one of the companies will be used as an alternative battalion CP, or the facilities of the command group may be used temporarily. Such plans are included in the SOP.

27. Headquarters Management

The S1 designates the specific areas to be occupied by the commander and by each staff

section and activity. He is assisted by the headquarters detachment commander (divisional) or the headquarters company commander (nondivisional), and the signal officer. Factors to be considered in the headquarters organization and operation include the following:

a. To reduce internal traffic, the message center should be located near the entrance to the CP.

b. The motor pool and its entrances and exits should be in a concealed and readily accessible location. A dismount point is established near the vehicular entrance to the command post.

c. Radio sets should be located to give the best transmission and reception. Remote control equipment may be used to allow the command post to be located on lower ground than that on which communications antennas are installed.

d. The switchboard should be located in an area near incoming wire circuits and away from noise and interference.

e. Incoming messages normally are taken to the message center to be signed for, and are then delivered to the S1 who routes them to the staff sections. Staff sections act on messages and, when necessary, inform the commander of their contents without delay.

f. Outgoing messages are sent to the message center in duplicate. The message center processes and records all messages.

Section IV. COMMAND AND STAFF ACTIONS

28. General

In most instances, particularly fast-moving airmobile operations, the sequence of command and staff actions as discussed in paragraph 29 may be too time-consuming. Trained and experienced commanders and staff officers continually keep abreast of the situation and constantly make or revise estimates. Decisions are often based on rapid estimates and, for the most part, orders are oral and fragmentary. Warning orders are issued to subordinate

commanders as early as possible to permit initial preparation. Subordinate commanders are not necessarily called to the command post to receive orders. They may be issued orders at any place or over the radio by the commander or designated staff officer in the name of the commander. Command and staff action sequence will vary according to the time available, the situation, the personality of the commander, and professional abilities of the commander and his staff.

29. Command and Staff Action Sequence

a. Upon receipt of a mission from higher headquarters (or the senior advisor to indigenous forces) the commander analyzes the mission to determine the specified and implied tasks which must be performed in order to accomplish the mission. The commander establishes liaison with the supported unit either immediately, using previously prepared plans, or after he has met with his staff and formulated tentative plans. Then, based on estimates and recommendations of the staff, his knowledge of the situation, guidance provided by the higher commander, and his professional judgment, he formulates and issues planning guidance. This *planning guidance* provides the necessary direction for concurrent planning by the staff and a framework for making studies and estimates. Planning guidance from the commander is essential to eliminate needless exploratory work by the staff.

b. Upon receipt of the commander's planning guidance, staff officers begin their individual *staff estimates*. Formulation of operation estimates requires certain detailed information from all staff officers. The S2 furnishes the S3 the results of his analysis of the weather, terrain, enemy situation, and enemy capabilities. The S1 and S4 furnish the S3 details pertaining to their respective fields.

c. As staff officers prepare their estimates, the commander supplements liaison by visiting with and advising the supported unit on aviation matters. Based on information obtained from the supported commander, the aviation battalion commander may change or modify his initial planning guidance. Each of the staff officers must then revise his initial planning estimates accordingly.

d. A meeting is then held during which the S3 presents possible courses of action to other staff officers. Each staff officer completes his estimate using these courses of action to determine what limitations exist and which course is favored from his respective viewpoint.

e. Each staff officer arrives at recommendations to be made to the commander. Again a meeting is conducted during which the S3 presents one or more courses of action and rec-

ommends priority. Each of the other staff officers comments in turn on significant aspects within his respective field and recommends the best course of action from his standpoint. The commander may question his staff to ascertain any additional information he requires to complete his estimate.

f. The commander completes his estimate and announces his *decision*. This decision is based on the supported unit commander's decision and recommendations from the staff. The decision is a concise statement of the general course of action which the unit will adopt to accomplish the mission. The statement should contain as much of the elements of who, what, when, where, how, and why as appropriate. The commander should elaborate upon the decision by issuing his *concept of the operation*. The concept is presented to the staff at the time of the announcement of his decision. This concept is really the basis for the concept of operation, which is paragraph 3a of the operation order. It presents the commander's visualization of the operation and may include—

- (1) Objective of operation.
- (2) Task organizations.
- (3) Escort plans.
- (4) Formations.
- (5) Maintenance support plans.
- (6) POL support.
- (7) General control measures to include loading area control, airspace control, and landing zone control.

g. Based on the decision and the concept, the staff *completes its planning*. The S3 has primary staff responsibility for the preparation of the plan. Additional details for the operation are furnished the S3 by other staff officers. The plan is then presented to the commander for his approval. After approval, the S3 prepares the plan (order) to implement the commander's decision.

h. After the order is issued, the commander, assisted by his staff, *supervises its execution*.

i. The executive officer coordinates the accomplishment of the above actions to insure that the proper coordination takes place between staff officers and the liaison officer, and

that the commander's desires are being followed. The executive officer is prepared to assume command if necessary.

30. Considerations in Developing Courses of Action

The aviation battalion commander and staff must consider the following essential elements in arriving at a course of action considered in the estimate.

a. Mission. The mission is always given first consideration in developing courses of action. The assigned mission, as well as missions of supported units, dictates employment of the battalion which in turn must be translated into missions for subordinate and supporting units. Planning is oriented towards accomplishment of the mission. The aviation battalion must be integrated into, and based upon, the fire support plan and scheme of maneuver of supported units. Also, future missions must be considered and priorities established for their implementation

b. Enemy. The location, disposition, and capability of the enemy (especially his air defense) must be considered.

c. Weather. The effects of weather on visibility, soil, trafficability, and men and equipment are important considerations in developing the best course of action for any operation. Low ceilings and limited visibility reduce enemy air and ground action and may be ad-

vantageous during some combat operations. These weather conditions can hinder air operations by precluding the use of large formations of aircraft.

d. Terrain. Terrain must be considered for local security and for locating airfields, heliports, loading zones, landing areas, navigation aids, flight routes, routes for ground supply, and communications support facilities.

e. Availability of Personnel, Aircraft, and Equipment. This refers to all the personnel, aircraft, and equipment available to the battalion. The disposition of the battalion and supporting units and time and space factors must be considered. Availability of maintenance support and navigational facilities is of primary importance. Class I, IIIA, and VA supplies require special considerations because of the large area of operations of an aviation battalion.

f. Airspace Utilization. Consideration must be given to use of available airspace as established within the broad guidance, including air regulations of the host country if applicable, for use of airspace within the theater of operations. At times the battalion may have to recommend changes to air defense rules of engagement, reentry procedures, concept of air support from other services, and the airspace utilization plan to accomplish a particular mission.

CHAPTER 3

RECONNAISSANCE, SELECTION, AND OCCUPATION OF POSITION (RSOP)

31. General

Reconnaissance of prospective base and satellite airfield locations is a continuing process. The preselection of a number of sites for possible future use will aid in selecting the most suitable position when the situation requires that the unit be displaced. The decision to displace is usually made on the initiative of the battalion commander in order to enable the unit to best respond to requirements of supported units. Divisional units must have prior approval of the division commander (G3) for both the intended location and time of displacement. Nondivisional units must obtain similar approval prior to displacement from headquarters exercising operational control over the unit. FM 1-5 contains details on the warning order and the reconnaissance, advance, and quartering parties.

32. Steps in the RSOP

a. Reconnaissance. Factors to be considered when making reconnaissance of possible future locations include the following:

- (1) Geographical location favoring the mission.
- (2) Terrain should be adaptable to requirements of the type aircraft being used with a minimum of engineer effort.
- (3) Terrain features should allow for the positioning of units on satellite airfields as required.
- (4) Terrain should be adaptable to requirements of maintenance and communications facilities, ground resupply, and other functions.
- (5) Terrain features should provide for maximum concealment of installations and activities.

- (6) The battalion should be located near its reserve or security forces commensurate with dispersion requirements of the situation.
- (7) Terrain should provide natural defensive features around the perimeter of the base airfield.

b. Selection. Final selection of the area to which the battalion is to displace, usually from areas tentatively selected in advance, is made as soon as possible after the need for displacement is established. The same considerations which are used for a reconnaissance (*a* above) are used in selecting the most suitable location for the base and satellite installations. Ground reconnaissance of the tentatively selected location follows map and aerial reconnaissance. The battalion advance party moves to the new location and prepares to guide elements of the battalion into position. The advance party consists of at least one representative of each of the battalion staff sections, one representative of each collocated company, necessary communications and maintenance personnel, and other personnel required by the situation. Battalion and company position areas are described as follows:

- (1) *Battalion position area.* The battalion position area encompasses the battalion headquarters, the main operating base, and airfields/heliports as required.
- (2) *Company position area.* A company position area includes the location of the company headquarters, flight operations, and the airfield/heliport from which the company's aircraft operate.

c. Occupation of Position. Occupation of position may be either hasty or deliberate, and may be executed during day or night. Follow-

ing is a discussion of the types of occupation which may be made by an aviation battalion.

- (1) *Daytime hasty.* When hasty occupation of an airfield or heliport during daytime is necessary, reconnaissance of the intended area is made by the reconnaissance party from the air while the main body is en route. Normally, the airfield is selected and a landing made by the reconnaissance party's aircraft. When use of the field has been determined feasible, the en route unit is advised. The reconnaissance party organizes the area and points out locations for arriving elements. The aviator of the reconnaissance aircraft may be required to position arriving units or act as the controller to land other aircraft.
- (2) *Daytime deliberate.* When sufficient time is available for preplanning and the careful selection of a new area, a deliberate move is made. The battalion commander's party moves to the new location to supervise preparations for positioning arriving units. The battalion is usually divided into two echelons for the displacement. Upon receipt of the commander's order, the first echelon moves to the new location. The second echelon remains operational during that period. After the first echelon completes displacement and becomes operational, the commander orders the second echelon to displace to the new location.
- (3) *Night hasty.* Night hasty occupation is not attempted except under conditions of extreme urgency. Under such conditions, the procedure discussed in (4) below is adapted to the situation.
- (4) *Night deliberate.* Deliberate occupation of an airfield or heliport at night requires the presence of more personnel in the area prior to the arrival of the main body than during the day. One representative from each section is required to lead that section to its

assigned area and also to guide arriving vehicles to parking areas. Vehicles should not move at night without a guide. To prevent delay at the entrance to the airfield or heliport, guides must be familiar with the area and must meet vehicles upon arrival. Aircraft should not be landed until the main body is closed and functional. The airfield or heliport lights must be in place and the facilities checked for usability prior to darkness. Wire communications should be operational and, if possible, the operations tent or vehicle should be in position prior to arrival of aircraft. Landings and ground movement of aircraft must be controlled by a controller familiar with the terrain and airfield organization.

33. Displacement of Headquarters

During the displacement, the battalion commander or his representative accompanies the advance party to the new location in advance of the first echelon to supervise preparations for positioning arriving units. The executive officer (or the commander) remains with the second echelon to conduct headquarters functions while the first echelon displaces to the new location. After the first echelon has completed the displacement and become operational and the battalion commander's party has established headquarters at the new location, the second echelon and the remaining headquarters element displace to the new location.

34. Aviation Battalion Marches

a. Motor march techniques to include proper intervals between vehicles, safe speeds, and security are discussed in detail in FM 55-35. Rehearsals are excellent means of resolving problems which will be encountered in actual moves. FM 19-25 contains guidance on essential motor vehicle traffic control techniques and procedures.

b. To insure continuous operations, movement of aircraft normally is made by echelons, divided into flights if necessary, with sufficient time intervals between flights to allow positioning in the new area without creating a

large concentration of aircraft. The trail aircraft of each flight should carry tools, parts, and maintenance personnel for emergency repairs en route.

c. The battalion should develop standing operating procedures covering motor and air moves to include loading plans. FM 100-5 contains doctrine governing troop movements.

CHAPTER 4

ORGANIZATION OF POSITION

Section I. COMMAND POST

35. General

The aviation battalion command post is the headquarters from which the commander and his staff exercise administrative and tactical functions. Personnel of the command post normally include—

- a. The battalion commander (who also serves as the division aviation officer in the divisional aviation battalion).
- b. The executive officer.
- c. The S1, S2, S3, and S4 or their representatives.
- d. The signal officer.
- e. The battalion sergeant major.
- f. Sufficient clerical, communications, and other personnel to assist the commander and staff in maintaining a 24-hour capability for the CP.

36. Location

a. The command post is located in the position best suited to accomplishing the mission and from which control over the elements of the battalion can best be exercised. Since reliable communications must be maintained, suitability of terrain to the operation of communications equipment is one of the first considerations in determining the specific location of the command post. For this reason, the signal officer, normally in conjunction with the S1, studies the terrain and makes recommendations for the exact location and interior arrangement of the command post.

b. The command post should be located so as to permit maximum dispersion of personnel or equipment consistent with efficient operations. It should not be near prominent terrain

features such as crossroads and bridges which could provide references for enemy observation and fire. Other matters to be considered include security, cover and concealment, accessibility, and soil condition and drainage.

c. The S3 makes recommendations for the general location of the CP to the battalion commander. The S1, after consultation with the headquarters company commander (non-divisional) and the signal officer, recommends selection of the specific site.

37. Internal Arrangement

The policy of the battalion commander, in accordance with the situation, influences the internal arrangement of the command post. The S1 has staff responsibility for positioning elements and personnel, normally in accordance with the battalion SOP. In general, personnel on duty in the CP at any given time are limited to those essential to its efficient operation. The minimization of foot and vehicular traffic within the CP is a basic consideration. Traffic can be reduced by locating key personnel and facilities in close proximity to others having the same areas of interest. It may be possible for the commander and principal staff officers to be located within voice distance of each other. The S1 and S4 may be collocated and the S2 may be collocated with the S3. A dismount point, established adjacent to the immediate area, will preclude unnecessary vehicular traffic in the CP. Location of the message center just inside the entrance to the command post will simplify the flow of outgoing and incoming messages. The location of the communications element near the message center will facilitate the flow of messages between those two elements. See figure 1 for a type aviation battalion command post diagram.

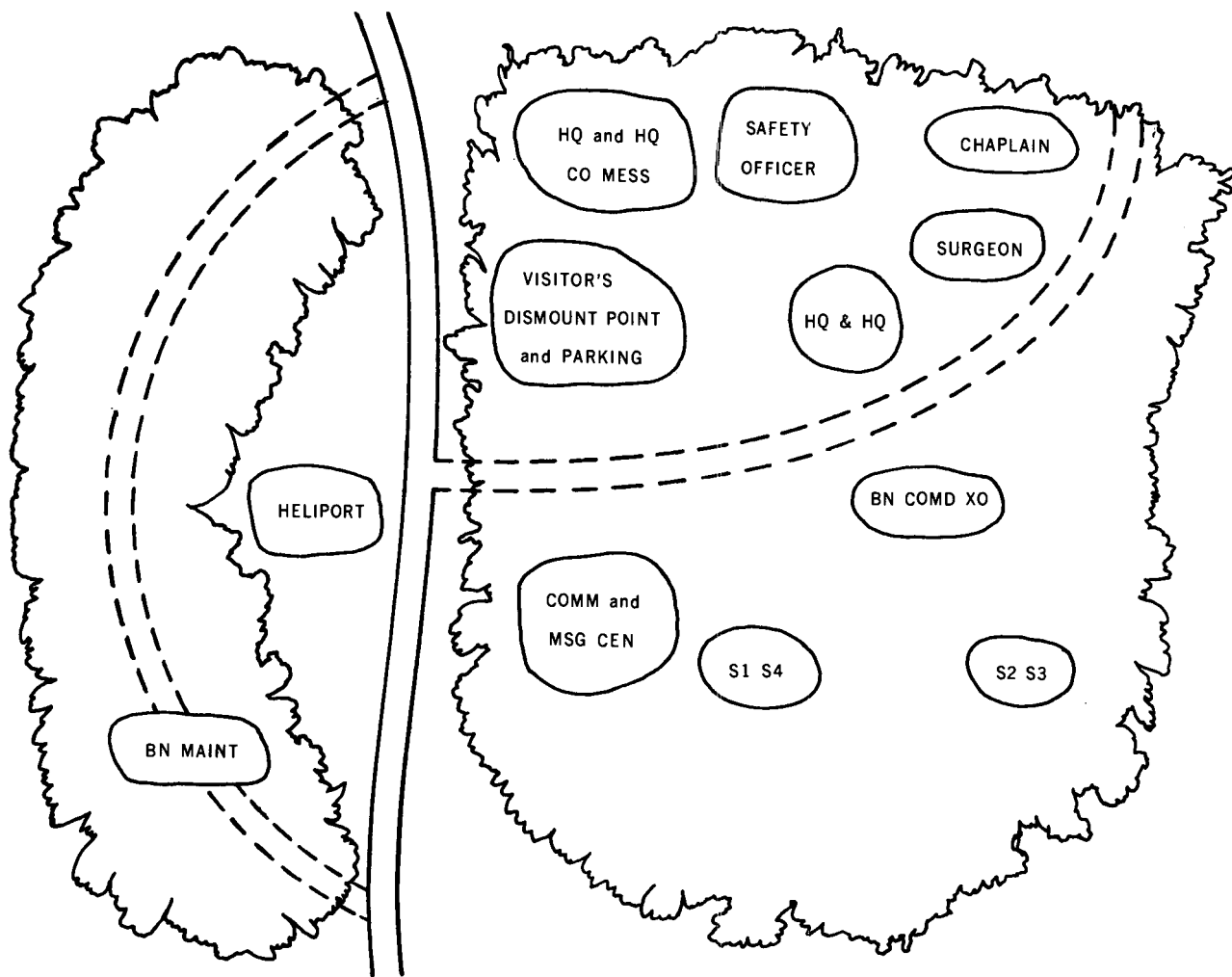


Figure 1. Type aviation battalion command post.

38. Security of the Command Post

The aviation battalion is basically responsible for the security of its own CP. The S3 has staff responsibility for this security. The headquarters company/detachment commander formulates and implements the local CP security plan. Where security is a problem beyond the capability of the battalion, the S3 recommends to the battalion commander that an appropriate security element be requested from higher headquarters (possibly through advisor channels in counterinsurgency operations). Avoidance of detection through use of camouflage, concealment, and dispersion reduces problems of security. Use of remote control equipment

makes possible the positioning of the command post in a wooded area or lower ground, with the radio antennas installed on adjacent hill-tops. Cover and concealment are gained by constructing cover and taking advantage of natural terrain features by locating the CP in a wooded or otherwise protected and concealed area. Natural concealment should be preserved by avoiding the creation of roadways leading to the command post as well as other terrain alterations which will be visible to enemy observers. If a helicopter landing area is needed, it should be located adjacent to the CP, preferably in a natural clearing near trees under which helicopters can be concealed from aerial observation. Panels or lights identifying the

landing area may be displayed during prearranged periods only; they should be concealed at other times. Deceptive approaches and departures should be used by aircraft crews operating to and from the vicinity for the purpose of landing or airdropping messages or equipment. Motor and foot traffic near the command post should be kept to a minimum and should be concealed to avoid attracting the interest of enemy observers.

Section II. HEADQUARTERS COMPANY/DETACHMENT

39. General

The headquarters company/detachment of the aviation battalion is organized to provide the necessary personnel and equipment to meet the internal administrative and operational requirements of the battalion headquarters. The headquarters company/detachment commander supervises the activities of the unit.

40. Elements

a. *Headquarters Detachment (Divisional).* Elements of the headquarters detachment (divisional) normally include the—

- (1) *Detachment headquarters.* The battalion adjutant (S1) serves as commander of the detachment headquarters. This unit provides administrative services for the battalion headquarters and headquarters detachment. These services pertain to individual requirements of assigned personnel to include mess, supply, quarters, supervision of nonduty hour activities, and the maintenance of some administrative records.
- (2) *Battalion headquarters section.* The battalion headquarters section provides the battalion commander and staff with enlisted personnel for the battalion staff sections.
- (3) *Battalion communications section.* Personnel of the battalion communications section supervise and participate in the establishment, operation, and maintenance of the communications system of the aviation battalion. They are also responsible for operating the battalion airfield terminal control facility, including air-ground communications and ground controlled approach (GCA) equipment.

(4) *Battalion maintenance section.* The battalion maintenance section performs organizational maintenance on wheeled vehicles organic to the headquarters and headquarters company and backup organizational maintenance for subordinate units. It also provides supervision for, and performs inspection of, all maintenance activities (to include aircraft maintenance) except signal within the battalion.

(5) *Battalion medical section.* The battalion medical section provides unit level medical service to include medical care and evacuation for the battalion and attached units. The medical section establishes an aid station and provides aid men to supported units.

(6) *Pathfinder detachment.* When authorized as an augmentation, a pathfinder detachment may be assigned to the battalion. Normally, the detachment is administratively attached to the headquarters company. The detachment reconnoiters and marks drop or landing sites to insure accurate delivery of personnel and material by airdrop or landing operations, and assists in navigation and control of Army aircraft in the objective area. (In the nondivisional role, the pathfinder detachment becomes an attachment rather than an augmentation.)

b. *Headquarters Company (Nondivisional).* The nondivisional aviation battalion is authorized a headquarters company commander. He is responsible for command and control over the enlisted men detailed to battalion headquarters when they are not on duty in the staff section. The headquarters company commander also—

- (1) Supervises the quartering party and establishes command post facilities.
- (2) Develops plans for and supervises security of the CP in coordination with the S3.
- (3) Maintains close liaison with other members of the battalion staff.
- (4) Provides and supervises administrative services, such as quarters and supply, for headquarters personnel.
- (5) Provides mess facilities for headquarters personnel.

CHAPTER 5

COMBAT SERVICE SUPPORT

Section I. GENERAL

41. General

Combat service support is the assistance provided to operating forces primarily in fields of administrative services, chaplain service, civil affairs, finance, legal service, maintenance, medical service, military police, replacements, supply, transportation, and other logistical services.

42. Responsibilities

The S4 is the staff officer responsible for

logistics within the aviation battalion. The S1 is responsible for personnel actions and the maintenance of administrative records and reports. Civil affairs activities of the aviation battalion are limited to those affecting accomplishment of the mission and those support tasks which may be properly assigned. FM 41-10 contains details concerning civil affairs operations.

Section II. LOGISTICS GENERAL

43. Major Areas of Responsibility

The S4 is responsible for the supply, maintenance, evacuation, and transportation services of the battalion. He keeps the battalion commander informed concerning supply matters within the battalion. The battalion headquarters section implements action to secure supplies, transportation, and food service support. Medical service is provided by the battalion medical section. Wheeled vehicle maintenance is performed by the battalion maintenance section. Miscellaneous related activities at the battalion level consist primarily of logistical planning and preparation of orders to implement the plan for combat service support of the tactical operation. Nondivisional aviation companies are designed and equipped to provide themselves with much of the logistical support provided by divisional aviation battalions to their assigned units.

44. Mess

a. Divisional Aviation Battalion. Unit feeding plans are prepared by unit commanders to

conform to their missions, locations, and other conditions. In the armored, infantry, and infantry (mechanized) divisions, the aviation general support company, normally located with the headquarters and headquarters detachment in the vicinity of the division instrumented airfield, provides mess facilities for the headquarters and headquarters detachment. In the airborne division aviation battalion, mess facilities for the general support company are provided by the headquarters detachment. The S4 provides for the feeding of detached units by transporting food to such units, supplying them with facilities and personnel for preparing their own food, or by other means. Arrangements can sometimes be simplified by arranging for a detached unit to mess with a collocated unit of another organization.

b. Nondivisional Aviation Battalion. The nondivisional aviation battalion's headquarters and headquarters company normally provides messing facilities for attached and supported personnel.

Section III. SUPPLY

45. Normal Supply

a. *General.* The field army support command (FASCOM) is responsible for providing all classes of supply to the field army. The division support command provides division level logistical support to include storage and distribution of class I, II, III, and IV supplies and control of class V supply. (In the airborne division, the support command provides storage and distribution of limited amounts of class V supplies.) If class V supplies cannot be delivered to the using unit, they must be picked up by the using unit directly from field army ammunition supply points (ASP) established and operated by elements of the FASCOM ammunition brigade.

b. *Divisional Aviation Battalion.* Following is a list of the classes of supply, including water, and a brief discussion of the requisitioning procedures for a divisional aviation battalion:

- (1) *Class I.* The divisional aviation battalion submits daily ration requests to the supply and transport battalion, and sends its organic vehicles to the prescribed class I distributing point to pick up class I supplies.
- (2) *Class II.* Class II supplies of the various technical services, with the exception of repair parts and medical, cryptographic, and electrical accounting supplies (to include punch cards), are provided by the supply and transport battalion. Medical supplies are provided by the medical battalion; cryptographic supplies by the signal battalion; and repair parts are provided by the maintenance battalion. Electric accounting supplies are provided by the administration company (FM 54-2). The supply and transport battalion delivers this class of supply directly to the user or to a forward class I distributing point where the items are issued to the requesting unit. Slow-moving class II supplies are provided through class II distributing points, and fast-moving

supplies are distributed by class I points.

- (3) *Class III.* Class III items are drawn from and may be delivered to the user by tankers of the supply and transport battalion.
- (4) *Class IV.* Class IV items are requisitioned through command channels. The supply and transport battalion delivers this class of supply to the user or to the forward class I distributing point where the items are issued to the requesting unit.
- (5) *Class V.* Ammunition requisitions (transportation orders), usually to replace expenditures from the basic load, must be approved by the division ammunition officer (DAO) who normally is located at the command post of the support command. The DAO may station a representative at the class V distribution point to facilitate authentication of requisitions for ammunition. The aviation battalion sends its organic vehicle to the DAO authentication point, then on to the class V supply point to pick up the needed ammunition.
- (6) *Water.* The division engineer battalion establishes water points at convenient locations near the class I supply point. The divisional aviation battalion sends its water-carrying vehicle to the nearest distribution point to obtain the battalion's water supply.

c. *Nondivisional Aviation Battalion.* The aviation company is the basic element of the nondivisional aviation battalion. Battalion headquarters normally enters the company supply chain only to establish priorities, expedite the replenishment of supplies, and to assist in the coordination of requisitions for supplies. This is particularly evident in counterinsurgency operations wherein battalion headquarters may be separated from its companies. When organic vehicles are used, each company sends its vehicles directly to the

nearest supply points to pick up class I, II, III, and IV supplies and water. Company vehicles move the small amount of nonaviation ammunition normally required from the class V supply point to the company area.

46. Aviation Supply

a. Divisional Aviation Battalion. Supplies peculiar to aviation are identified by the suffix A. The classes of aviation supply are as follows:

- (1) *Class IIA and IVA.* Class IIA and IVA supplies and aviation repair parts, including avionics repair parts, are provided on an as needed basis by the transportation aircraft maintenance company of the division support command maintenance battalion.
- (2) *Class IIIA.* Where unit distribution is not effective, the using unit sends its organic refueling equipment to the class IIIA supply point to pick up aviation POL supplies. If organic

equipment is inadequate, local arrangements are made for other vehicles to assist in the POL supply.

- (3) *Class VA.* Each company of a divisional aviation battalion uses its organic vehicles to transport aviation ammunition from the nearest ammunition supply point. Units whose ammunition expenditures may exceed their transportation capabilities may request additional transport vehicles from the supply and transport battalion.

b. Nondivisional Aviation Battalion. Elements of the nondivisional aviation battalion use their organic vehicles to pick up all classes of aviation supply. Aircraft, avionics, and aerial armament repair parts are obtained from the transportation aircraft direct support company of the direct support maintenance battalion in the direct support group. Aviation ammunition and POL supplies are obtained at designated supply points.

Section IV. MAINTENANCE

47. General

Maintenance includes all actions taken to keep equipment in a serviceable condition or to restore it to serviceability. The battalion commander performs maintenance inspections to ascertain the serviceability of equipment and promote efficient maintenance. The battalion maintenance section (the battalion maintenance and supply section in the nondivisional aviation battalion) keeps the commander informed regarding the status of organizational maintenance activities in the battalion.

a. Categories of Maintenance. Categories of maintenance are as follows (AR 750-1):

- (1) *Organizational maintenance.* Organizational maintenance is that maintenance normally authorized for, performed by, and the responsibility of a using organization on equipment in its possession.
- (2) *Direct support maintenance.* Direct support maintenance is that maintenance normally authorized and per-

formed by the designated maintenance activities in direct support of using organizations. It consists of the repair of end items or unserviceable assemblies in support of using organizations on a return to user basis.

- (3) *General support maintenance.* General support maintenance is that maintenance authorized and performed by designated TOE and TD organizations in support of the Army supply system.
- (4) *Depot maintenance.* Depot maintenance activities, through overhaul of economically repairable materiel, augment the procurement program in satisfying overall Army requirements and, when required, provide for repair of materiel beyond the capability of general support maintenance organizations.

b. Maintenance Responsibilities.

- (1) *Commander.* A commander is responsible for—

- (a) Insuring that all equipment issued to his unit is in a serviceable and combat ready condition and is properly used, maintained, and serviced.
- (b) Advising higher commanders of equipment replacement and maintenance support requirements.
- (c) Complying with preventive maintenance instructions and procedures, to include training his command accordingly.
- (d) Assigning maintenance responsibilities for organizational equipment to specific individuals.
- (e) Advising the commander of the support aircraft maintenance direct support company concerning projected maintenance support requirements, coordinating with the support commander in developing a mutually acceptable aircraft maintenance support plan, and assuring delivery of equipment to the maintenance activity in accordance with the agreed upon maintenance schedule.

- (2) *Individuals.* Individuals are responsible for equipment issued for their own use. Operators or users of equipment are responsible for proper preventive maintenance of assigned equipment.

c. Maintenance Inspections. Inspections are the means by which commanders ascertain the serviceability of equipment and promote efficient maintenance. The commander insures that action is taken to correct deficiencies noted during inspections. The maintenance battalion of the division support command inspects the organizational maintenance of aircraft and motor vehicles (FM 54-2). This service is provided to nondivisional aviation units by the maintenance battalion of the direct support group (FM 55-45).

d. Maintenance Records. Maintenance records are kept in accordance with the Army integrated equipment records and maintenance management system (TM 38-750 and TM 38-750-1).

48. Aircraft Maintenance

The divisional aviation battalion maintenance officer keeps the battalion commander informed as to the status of battalion aircraft. The maintenance officer collects this information through status reports, through inspection of aircraft, and by following closely the progress on aircraft undergoing maintenance. Aircraft maintenance at the direct support level, to include supply, recovery, and repair, is performed by the transportation aircraft maintenance company of the division support command's maintenance battalion. (This service is performed for the nondivisional aviation battalion by the maintenance battalion of the direct support group.) The aircraft maintenance company also provides direct support avionic and armament maintenance for items installed in aircraft of the aviation battalion.

49. Vehicle Maintenance

a. The battalion maintenance officer and motor vehicle personnel assigned to the maintenance section assist the battalion commander by keeping him informed regarding the status of motor vehicles in the battalion. This information is collected by the maintenance section through vehicle status reports from the various units, inspection of maintenance records, inspection of equipment, and investigations to determine progress being made on vehicles undergoing maintenance. The maintenance section also procures parts and services necessary to the organizational maintenance of the battalion's motor vehicles.

b. The battalion maintenance section performs vehicle maintenance at the organizational maintenance level which is beyond the capabilities of drivers and crews whose maintenance duties generally are confined to the operation, cleaning, and lubrication of vehicles. In the divisional battalion, this section assists the company maintenance personnel in performing organizational maintenance as necessary. Vehicle maintenance beyond the organizational level normally is provided to the divisional battalion by the headquarters and main support company of the division support command maintenance battalion (FM 9-30 and FM 29-22).

50. Other Maintenance

Organizational maintenance of organic medical, communications, nonvehicle ordnance, and similar equipment is performed by personnel of the unit using the equipment. Direct support

maintenance of medical equipment may be performed by the division medical battalion or by the nearest medical unit having a direct support capability. Direct support maintenance for nondivisional units is performed by the maintenance battalion of the direct support group.

Section V. OTHER LOGISTICAL MATTERS

51. Captured Materiel

The aviation battalion will seldom be concerned with the disposition of captured enemy materiel. However, the commander must provide for the prompt disposition of any such materiel acquired by the battalion. Items of new or unusual design are selected for routing through intelligence channels. Other captured materiel is disposed of in the same manner as salvage. The use of captured materiel which may lead to misidentification of the user by friendly forces is restricted to emergency conditions and is undertaken only after adjacent friendly forces have been alerted to plans for its use.

52. Destruction of Supplies and Equipment

a. The laws of land warfare forbid intentional destruction of medical supplies and equipment (FM 27-10).

b. Upon authority from higher headquarters, normally according to a previously prepared plan, nonmedical supplies and equipment may be destroyed to deny their use to the enemy.

c. Nonmedical supplies and equipment which can be put to use to relieve suffering by civilians will not be destroyed but will be turned over to the appropriate civil affairs unit for disposition in accordance with the theater policy relative to civilian supply.

53. CBR Effects on Combat Service Support

Following a nuclear attack, battalion units are re-equipped and resupplied as quickly and completely as the situation permits. It may be possible to redistribute supplies and equipment within the battalion to relieve severe shortages in units most seriously affected by the attack. Initial decontamination efforts are confined to those areas containing critically needed supplies and equipment. Commanders must arrange to operate with available supplies and equipment until resupply can be accomplished. Combat service support functions will be concentrated on alleviating shortages in priority areas during the resupply period.

54. Decontamination

Decontamination is the process of making any person, object, or area safe by absorbing, destroying, neutralizing, making harmless, or removing chemical or biological agents, or by removing radioactive material clinging to or around it. The aviation battalion will be concerned primarily with the decontamination of personnel, equipment, supplies, aircraft, and ground vehicles. Washing and weathering are two of the simplest means of decontamination. FM 21-40, FM 21-41, and TM 3-220 contain details on the decontamination of personnel and equipment.

Section VI. MEDICAL SUPPORT

55. Organization of the Medical Section

a. The battalion surgeon supervises the operation of the medical section (aid station) in the divisional aviation battalion. He assigns medical aid personnel to accompany detaching elements of the battalion. Enlisted medical per-

sonnel assist the surgeon in providing medical care and treatment within the capability of the section.

b. The nondivisional battalion receives medical support through the area medical support organization.

56. Operation of the Medical Section

a. Aid men furnish emergency medical treatment to patients in the field. If further treatment is required, patients are evacuated to the battalion aid station where emergency treatment is continued. Patients who can be treated within the capabilities of the aid station and within the limitations of the evacuation policy are retained at the battalion aid station and returned to duty. Patients whose injuries or illnesses necessitate further treatment are evacuated to the nearest clearing station or other appropriate medical treatment facility. Patients are evacuated by air and ground ambulances of the supporting medical unit. If the

requirement for evacuation of patients exceeds the capability of the supporting ambulance unit, nonmedical aircraft may be employed under control of the surgeon.

b. Personnel of the nondivisional battalion are evacuated to the nearest appropriate medical facility of the FASCOM medical brigade.

57. Medical Supply

Medical supplies and equipment for the aviation battalion are requisitioned by the battalion surgeon from the division medical battalion, or the nearest medical unit with support capability. These requests may be carried by ambulances evacuating patients.

Section VII. PERSONNEL ACTIONS AND ADMINISTRATIVE RECORDS AND REPORTS

58. Personnel Actions

The battalion S1 conducts or supervises most personnel actions in the battalion. His activities are coordinated with other battalion staff officers regarding their areas of interest and in accordance with the SOP. Personnel functions for which the S1 is responsible, wholly or in coordination with other battalion staff officers, include—

- a. Personnel records and reports.
- b. Replacements.
- c. Prisoners of war.
- d. Recovery and disposition, including search, recovery, identification, and evacuation (in coordination with the S4) of U.S., Allied, or enemy dead.
- e. Maintenance of discipline, law and order.
- f. Morale and personnel services, including pass and leave policy, awards and decorations, mail, finance service, special services, and promotions and battlefield appointments.

59. Unit Records and Reports

The S1 is responsible for maintaining unit records and for preparing reports required of the battalion. The unit SOP should indicate the battalion commander's requirements regarding the preparation and maintenance of such rec-

ords and reports. Written reports which may be required include initial strength report, field morning report, airhead strength report, personnel report, personnel daily summary, personnel situation report, and casualty feeder reports. Notes and memorandums may be maintained to facilitate preparation of necessary reports. Company reports can often be minimized by use of the telephone.

60. Unit Journal

The unit journal is a logbook of chronological record of events kept by a unit or staff section. The S3 maintains the journal for the battalion. The commander may require that each staff section, or any combination of staff sections, maintains a journal covering the activities in their respective areas of responsibility (FM 101-5). The classification of the journal will be stamped at the top and bottom of each page.

61. Workbook

Each battalion staff section maintains a workbook in which is recorded information regarding the section for possible future use in preparing reports, estimates, plans, and orders. The format of the workbook will be varied to fit the needs of the user. The classification will be stamped at the top and bottom of each page.

CHAPTER 6

PLANS AND OPERATIONS

Section I. MISSION ASSIGNMENT

62. General

The general organizational objective of Army aviation is to provide an organization which can augment and improve the capability of the Army to conduct prompt and sustained combat incident to operations on land. The opportunity to employ aviation to the best advantage may come suddenly and require immediate action on the part of the aviation battalion or its subordinate elements. For this reason the battalion must maintain a constant state of readiness, consistent with its routine missions. Prior planning and coordination of aviation support will considerably reduce preparation time by the supporting and supported units, and will promote efficient and rapid reaction to operational requirements. Close coordination between the supporting and supported commanders is of primary importance for accomplishment of the mission. When the mission assigned to a company is different from the mission of the battalion, the company may be placed under operational control of the headquarters that directed and is supporting the operation. Under certain circumstances, an aviation battalion commander may attach one company to another or place one under operational control of another for a specific mission or period of time.

63. Tactical Missions and Command Relationships

a. Support requirements to be implemented by an aviation battalion are indicated by the assignment of tactical missions. These tactical missions are assigned by the commander of the force being supported by the battalion.

b. A subordinate aviation commander has the authority, inherent in his command respon-

sibility, to issue orders to elements under his command as necessary for the accomplishment of his assigned mission. This includes organizing his unit for combat and dividing assigned tactical missions into appropriate tasks, if such action does not derogate his overall capability of accomplishing his assigned mission and does not reduce the degree of centralized control retained by the commander of the unit being supported.

c. Aviation units may be assigned one of three standard tactical missions: general support (GS), reinforcing, or direct support (DS). The responsibilities inherent in each of these standard missions are reflected in table I.

- (1) *General support.* An aviation unit assigned the mission of GS furnishes aviation support to the forces as a whole. Control is retained by the parent unit or a higher headquarters which also establishes priorities for support. The supporting unit commander prepares his own plans and orders and retains the responsibility for all his unit does or fails to do.
- (2) *Reinforcing.* An aviation unit assigned the mission of reinforcing augments the aviation support capabilities of another aviation unit. The reinforcing unit remains under the command of the commander who assigned the reinforcing mission, but its flight missions are planned and controlled by the reinforcing unit. A direct communications channel is established between the reinforcing and the reinforced units, and the reinforced unit calls directly upon the reinforcing unit for flights.

Table 1. Missions and Command Relationships for Aviation Unit

An aviation unit assigned the tactical mission or command relationship of—	Receives tasks and responds directly to—	Establishes communications and liaison with—	Moves base by order of—	Combat service support furnished through—	Highest degree of control that can be passed to subordinates—
Attachment ----	Headquarters to which attached.	Headquarters to which attached.	Headquarters to which attached.	Headquarters to which attached unless otherwise specified.	All missions and relationships listed herein.
Operational control.	Headquarters exercising operational control.	As directed by the headquarters exercising operational control.	Headquarters exercising operational control.	Habitual service support channels or as otherwise specified.	Operational control, DS, GS, reinforcing.
Direct support.	Headquarters being supported.	Headquarters being supported.	Parent unit, or at the discretion of the supporting unit commander.	Habitual service support channels or as otherwise specified.	DS
General support.	Headquarters being supported.	As directed by the headquarters being supported.	Parent unit, or headquarters being supported.	Habitual service support channels or as otherwise specified.	GS
Reinforcing ----	Headquarters being reinforced.	Reinforced headquarters.	Parent unit, or at the discretion of the reinforcing unit commander.	Habitual service support channels or as otherwise specified.	Reinforcing

(3) *Direct support.* An aviation unit assigned the mission of DS provides aviation support for a specified command, to include the staff function of advising and assisting the supported commander in all aviation matters. The DS aviation unit commander positions his unit and coordinates its activities with those of the supported command as necessary to properly accomplish the support mission. However, the aviation unit remains under the command of the commander who assigned the DS mission. The supporting unit commander prepares his own plans and orders and retains the responsibility for all his unit does or fails to do. This supporting role provides a direct mission request channel between the units with the supported unit commander specifying the requirements while the supporting unit

commander determines how the requirements are to be provided.

d. In addition to the tactical missions mentioned in *c* above, aviation units may be attached to, or placed under the operational control of, the supported unit. These methods of assignment constitute a status or condition for the supporting unit and are not tactical missions. The responsibilities inherent in these missions or assignments are indicated in table I.

(1) *Attachment.* Attachment is the assignment of a status, not a tactical mission; a tactical mission is assigned by the command to which attachment is made. An aviation unit may be attached to a maneuver element or to another aviation unit. Attachment of an aviation unit provides the gaining commander the maximum control possible. In addition to complete control, the gaining commander is re-

sponsible for providing the logistical and administrative functions for the attached unit. Because of the increased burden imposed by these functions, attachment of aviation units will be made only when the situation dictates, such as duration or distance involved in support of the operation. Should a supported unit be unable to provide the required support, the attachment order may limit the amount of service support provided.

- (2) *Operational control.* Aviation units may be placed under the operational control of the supported unit to allow the supported unit to plan and direct the operation. The degree of control provided with this assignment is the same as that given by attachment, except that the supported unit is not responsible for the logistical and administrative functions of the aviation unit.

64. Additional Aviation Support

An operation may require aviation support in addition to that which can be provided by organic aviation. To provide this support, non-organic aviation units may be made available. These supporting units may be given any of the missions or command relationships discussed in paragraph 63. Supporting units are usually controlled by the headquarters of the supported unit; however, circumstances may require that control be delegated to a lower level. The supported force commander may delegate the same or a lesser degree of control than that which he has been given.

65. Planning Factors

Aviation planning is based on tactical plans of units to be supported. To insure mission accomplishment and maximum efficiency, the following factors should be thoroughly analyzed:

a. Mission. Missions assigned to aviation units, as well as the mission of the supported unit, must be considered.

b. Enemy Situation. The location, disposition, and capabilities of enemy units will be

considered, with special emphasis on air defense capabilities.

c. Coordination. Complete coordination must be accomplished, including coordination with the supporting aircraft maintenance company. The supporting aviation unit commander has primary responsibility to accomplish coordination.

d. Aircraft Requirements and Future Commitments. In determining the number of aircraft to be committed in support of a specific operation, the aviation commander must consider planned future commitments and relative operational priorities. He must evaluate the materiel readiness of his equipment, compute the approximate number of operational flying hours that will be required to support commitments, and determine when scheduled support maintenance will be required.

e. Crew Requirements. The availability of aircraft crewmembers is as important to a unit's capability for mission performance as the availability of aircraft. Crew requirements must be considered in conjunction with, rather than separate from, requirements for aircraft. The personnel strength status in officer/warrant officer aviators and enlisted aviation specialists will allow the commander to determine the capabilities for operating available aircraft.

f. Logistical Requirements. Special considerations must be given to logistical requirements, to include POL, ammunition, and maintenance.

- (1) *POL.* For extended operations, the location of refueling points should be planned and located so as to become an integral part of the plan of operation.
- (2) *Ammunition.* Considering that only small quantities of ammunition can be carried on Army aircraft, reloading facilities must be well organized to permit rapid turn around times. To expedite operations, reloading sites should be located well forward in conjunction with refueling points.
- (3) *Maintenance.* To assure a satisfactory level of aircraft availability, maintenance must be continual. This requires that a maintenance schedule

be prepared and complied with. Maintenance planning and scheduling requires the closest working relationships between the supported and supporting units. Upon call of the aviation unit, the supporting aircraft maintenance company furnishes mobile repair teams to make on-site repairs and, when required, to provide field recovery of downed aircraft.

- (4) *Special equipment.* Plans must include requirements for any special equipment to be used during the assigned mission.

g. Weather Information and Sources. Weather conditions are an important consideration in operational planning. While low ceilings and limited visibility conditions may restrict aviation operations, such conditions may be used to advantage in shielding the aircraft from enemy observation and permitting the element of surprise. Weather information is received from the air weather service detachment.

h. Maps, Charts, and Photos. All available maps and charts will be used during operation planning and, when possible, will be supplemented by aerial photos.

i. Flight Routes, Altitudes, and Formations. Flight routes, altitudes, and formations must be based on the plan of operation and should afford the best possible concealment offered by the terrain, avoid enemy detection and encounter short of the objective(s), and, if possible, remain within range of friendly supporting fires. Air movement plans must be coordinated with fire support and air defense elements in tactical operations centers. In the counterinsurgency operational environment, the movement plan must be coordinated with the controlling tactical operations center, air support operation center, or similar indigenous or combined control center such as the area support coordination center (ASCC).

j. Navigational Aids. Maximum use is made of navigational aids available within the area of operation.

k. Movement Control. The aviation battalion commander is rarely able to exercise the degree of movement control he desires during admin-

istrative or tactical operations. This is particularly true in tactical operations in which control is complicated and must be carefully supervised. Effective supervision of control measures is exercised through the use of the chain of command. Movement control is a vital part of planning for aviation support of combat operations. Movement control measures should be continually stressed in all phases of planning, established as part of the unit SOP, and exercised through the chain of command.

l. Loading Area and Landing Zone Control.

- (1) *General.* Control of loading areas and landing zones is of prime importance to prevent congestion of aircraft.

- (2) *Loading area.* To prevent massing of supported units and aircraft within the loading area, operations should be timed to provide for the simultaneous arrival of troops (by aircraft load) and aircraft in the loading area. This will assist in assuring maximum security and rapidity of movement. Also, timing should permit immediate takeoff following loading. Control of the loading area is normally under the overall supervision of the supported unit commander and may utilize pathfinder personnel or unit terminal guidance personnel.

- (3) *Landing zone.* Control of the landing zone is normally performed from an airborne command post. For terminal guidance, pathfinder personnel may be parachuted, rappelled, or airlanded into the landing zone prior to the arrival of the airmobile force or may be part of the initial helicopter assault. The decision to use pathfinder personnel rests with the airmobile force commander.

m. Deceptive Tactics. Planning should consider use of tactics which deceive the enemy as to the true purpose or destination of the operation.

n. Crash Rescue Plan. The battalion SOP describes the organization and functions of the crash rescue plan (para 99a) as applied to general operations. The operations order adapts the plan to the specific operation con-

cerned. Included in the crash rescue plan are procedures to be followed by—

- (1) Crews of downed aircraft in determining whether to remain with the aircraft to await rescue, or to abandon the aircraft and employ evasion and escape measures to return to friendly lines.
- (2) Crews of trail and other aircraft in locating downed aircraft and directing crash rescue personnel to the scene.
- (3) Aircraft crews in locating downed aircraft, rendering aid to the occu-

pants, and directing crash rescue personnel to the scene.

- (4) Personnel concerned with the recovery or destruction of downed aircraft.

o. Signal Items. Items such as frequencies, call signs, authentication tables, and air-ground reference signals must be coordinated and issued during aircrew briefings.

p. Evasion and Escape. Aircrews and passengers should be briefed on the route of flight and the procedures to follow should the aircraft be downed. Evasion and escape procedures must be incorporated in detail in the unit SOP (FM 21-77).

Section II. OPERATIONS

66. General

Effectiveness and responsiveness of Army aviation operations are greatly facilitated and enhanced by standing operating procedures. Details covering the conduct of all tasks within the capabilities of the aviation battalion should be outlined in unit SOP to reduce reaction time.

67. Airmobile Operations

a. Airmobile operations are employed in the furtherance of the ground combat effort. Their use permits the ground force commander to employ the capabilities of Army aviation units in forming a balanced combat force to accomplish a wide variety of tasks. The capability of conducting airmobile operations enables the commander to—

- (1) Pose a constant threat which may cause the enemy to divert combat force to maintain a strong posture in rear areas to protect vital installations and hold key terrain.
- (2) Overcome distances and bypass barriers and enemy defenses.
- (3) Greatly extend the area over which he can exert his influence.
- (4) Deploy his forces more effectively by holding highly mobile reserves in dispersed areas.
- (5) Gain a favorable tactical mobility differential over enemy ground forces.

b. The capability for ground combat units and Army aviation units to conduct airmobile operations must be highly developed through frequent airmobile unit training and the development of pertinent unit standing operating procedures. The unit SOP is based on those prepared by the highest headquarters having control over both the ground combat and Army aviation units. A detailed discussion of all aspects of airmobile operations is contained in FM 57-35.

c. When the operation is to be supported by Army pathfinders and/or terminal guidance personnel, complete coordination must be accomplished. Detailed information on pathfinder operations is contained in FM 57-38 and FM 57-35.

68. Aerial Escort and Suppressive Fire Tasks

Aerial escort is employed in support of airmobile and ground columns to provide suppressive or destructive fires. Detailed planning and coordination are required to insure effective support between the escort and airmobile force commanders. Escort of airmobile elements is conducted primarily to enhance the security of transport aircraft while en route and/or while in the objective area. En route security will consist of escort aircraft delivering suppressive fires against only those enemy targets which directly affect the

security of the airmobile force. *Suppressive fires* will be delivered in the objective area while transport helicopters are off-loading personnel. Should the escort aircraft be required to remain in the objective area to deliver fire in support of the ground force, its task will change to an aerial fire support task.

69. Battlefield Surveillance Tasks

Battlefield surveillance involves the systematic and continuous observation of selected areas by visual, electronic, and photographic means. The accomplishment of this task provides the supported commander with current intelligence with which he can influence the action. The overall aerial surveillance plan is coordinated under the staff supervision of the force G2 (S2) and received at the aerial surveillance and target acquisition (ASTA) platoon of the aviation battalion in the form of assigned tasks. Types of surveillance are as follows:

a. Visual. Visual surveillance is accomplished by all aircraft within the aviation battalion whether on a specific surveillance task or in conjunction with another task. Reports of an immediate nature are relayed by radio through intelligence or command channels. If an immediate report is not required, a report is forwarded through intelligence channels following the task debriefing.

b. Electronic. Electronic surveillance is performed through the use of infrared (IR) and side-looking airborne radar (SLAR) equipment. Simultaneously with the recording of the imagery in the aircraft, a signal is transmitted to ground station (data link) where the imagery is recorded for processing and subsequent evaluation. The ground equipment normally is located near the force headquarters. This will allow the military intelligence personnel to interpret the imagery and provide immediate information. The planning and coordination of missions for IR and SLAR sen-

sors are the responsibility of the force G2/S2 Air (FM 30-20).

c. Photographic. Requests for aerial photos are received and coordinated by the force G2/S2 Air and relayed to the ASTA platoon of the supporting aviation battalion.

70. Battlefield Resupply Tasks

a. Aviation battalions assist in the movement of supplies and equipment within the combat zone to augment the ground force commander's capability to accomplish the land combat functions of mobility and logistics. Coordination and planning for resupply tasks will be accomplished at the level possessing the supplies and aircraft required to perform the desired task. In addition to normal aviation task planning, planning for resupply tasks includes the following:

- (1) Responsibility for preparing and loading supplies and equipment (normally not an aviation unit responsibility).
- (2) Method of delivery (airlanded, air-dropped, or by low level extraction).

b. TM 57-210 and operator's manual of available aircraft present detailed information on resupply.

71. Other Tasks

Other aviation tasks which are within the capability of an aviation battalion are as follows:

- a.* Aerial fire support.
- b.* Reconnaissance support.
- c.* Command control.
- d.* CBR support (to include dissemination and conduct of aerial radiological survey).
- e.* Airlift for movements of patients.
- f.* Airlift in support of civil affairs requirements.
- g.* Battlefield illumination.
- h.* Psychological operations (loudspeaker broadcasts, leaflet dissemination).
- i.* Aerial messenger service.

Section III. AIR TRAFFIC REGULATION

72. General

The Army Air traffic regulation system and its operation are based on principles and pro-

cedures that permit maximum use of airspace by unit commanders in responding to the requirements of the tactical situation. Unit com-

mand control of aircraft is the basic means of coordinating and regulating the employment of Army aircraft within the division area. Positive air traffic control measures are exercised during instrument flight conditions and/or above a specified coordinating altitude. These control measures are regulated by an air traffic control agency operated under the control of corps or higher headquarters.

73. Visual Flight Conditions

Unit control is the normal method of regulating Army aircraft operating in visual flight conditions throughout the division area. Control measures are specified by the commander of the supported unit and are exercised through the commander of the supporting aircraft unit. Flight plans, for aircraft being operated under unit control, are regulated by the unit concerned. These flight plans are submitted to the aviation unit's supported unit command post prior to execution of the flight. The progress and position of Army aircraft operating under unit control are monitored on the basis of local flight plans which contain the planned destination, route to be traveled, and estimated time of arrival.

74. Instrument Flight Conditions

a. All flights conducted under instrument conditions and/or above specified coordinating

altitudes are under the positive control of an air traffic regulating agency from takeoff to landing. This control is initiated when a flight plan is filed with an air traffic regulating agency, either directly or through the facilities of an instrumented airfield. It consists of flight following, holding instructions, terminal guidance, approach clearance, and any special instructions or in-flight advisories which may be dictated by the tactical situation.

b. Airfields, such as the division instrumented airfield, are capable of providing terminal control to incoming and outgoing aircraft. This control is provided by the unit's landing control personnel, using the ground controlled approach radar and/or radio beacon sets. Terminal control is coordinated with the air traffic coordination plan of the air traffic regulating agency.

c. Procedures for the use of GCA radar or beacon approaches at instrumented airfields will be established and disseminated to aviation units operating in and around the appropriate airfield. These procedures will be forwarded to the air traffic regulating agency for distribution. Malfunctions of approach aids will be reported immediately to the regulating agency and all using units. Details of terminal control procedures are contained in FM 1-60.

Section IV. VARIED ENVIRONMENTS

75. General

Basic principles established in field service regulations apply to Army aviation operations in all environments (FM 100-5). When weather and terrain conditions are known in advance, or can be predicted with reasonable accuracy, planning enables a unit to take advantage of favorable factors and moderate or avoid the effects of unfavorable conditions. Advance training of personnel for the specific environment of operations is highly desirable and special equipment for the environment is often necessary for efficient operation. Army aircraft can operate in any geographical environment. Although weather and terrain may limit aircraft operations, the same conditions will frequently limit the operations of non-

aviation personnel and vehicles as well. This may result in an increase in the comparative effectiveness of aviation operations. Seldom is planning more essential than in preparing for Army aviation operations in weather and terrain conditions approaching the extremes of environment.

76. Deserts

a. *General.* Fairly-flat, sandy-to-rocky terrain, high winds, great temperature variations, and vast distances are among the characteristics which influence plans and operations in the desert. Sand and dust that pollute fuel and cause excessive wear to aircraft components also reveal enemy movements. The flat terrain that affords plentiful landing areas for Army

aircraft also enables the enemy to observe aircraft movements over great distances. Since dust clouds created by hovering helicopters reveal friendly positions, limit pilot visibility, and cause sand ingestion damage to aircraft components, care must be taken to limit hovering and to employ accepted techniques for takeoff and landing in dust or sand areas. Desert hills and depressions seldom limit the mobility of surface vehicles, and provide little in the way of natural concealment. Since the desert contains little or nothing on which a military force can survive, increased transportation is required to supply men and machines with the necessities for survival and effectiveness. Also, more time is required to perform functions in the desert than in more temperate environments. Air and ground vehicles must be refueled with time-consuming care to prevent fuel contamination by sand. Maintenance is more time consuming because precautions must be taken to protect parts and assemblies from sand and dust. Heat and other factors may reduce the efficiency of personnel. Plans must allow for this increased time requirement in desert operations (FM 31-25).

b. Survival. Desert conditions are among the most difficult in which the human body may be required to function, necessitating the most careful planning and execution of measures to keep troops in effective condition. The commander should rely heavily upon the advice of the surgeon relative to survival in the desert. The scarcity of water under conditions of desert heat not only contributes to physical discomfort, but can hinder the accomplishment of the mission by rendering troops ineffective. The lack of shade or other shelter may make it necessary to schedule most activities at night in order to avoid or decrease exposure of personnel to excessive heat (FM 21-76).

c. Maintenance. The unfavorable effects of the desert upon machines and equipment of all types, added to the difficulty of resupply of repair parts, greatly increases the importance of preventive maintenance. Sand probably causes more damage to machinery than any other single factor introduced by the desert environment. Air cleaners must be serviced often to prevent their becoming clogged. En-

gine cooling systems must be carefully maintained and temperature gauges frequently checked for evidence of overheating. Ordnance items must be protected by covers and their moving parts inspected and cleaned often. Communications and other equipment must be protected from heat, sand, and the impact of great temperature fluctuations of the desert. Appropriate publications should be consulted for details on the care of specific items of equipment.

d. Special Equipment. Desert temperatures, which can range from more than 100° F in the day to below freezing at night, make it necessary to issue equipment designed to protect personnel from heat and cold. Camouflage paint, nets, and similar devices aid in avoiding enemy detection in terrain which offers little for concealment of men and equipment. Aircraft and ground vehicles should carry survival kits and extra water. Basic navigation equipment such as maps and compasses should be included in the survival kits. Emergency radio sets, highly useful in expediting rescue operations, should be issued to each aircraft and, if available, to each ground vehicle operating in the desert environment.

e. Tactics. Desert tactics are normal tactics modified to conform to desert conditions. Factors to be considered in making these modifications include the following:

- (1) *Day.* Desert weather is relatively predictable. This predictability is one of the commander's most useful tools in planning desert operations to utilize the mobility provided by Army aviation. Visibility good during most of the day, is frequently reduced by duststorms during the afternoons. This reduced visibility can be used to conceal some operations. The heat contributes to increased density altitudes resulting in decreased aircraft range or payloads.
- (2) *Night.* Conditions in the desert at night are highly conducive to military operations. Duststorms are reduced in intensity and frequency; temperatures are seldom low enough to limit night operations. Visibility

is usually good to excellent for both friendly and enemy observers.

- (3) *Loading areas.* Difficulty of concealment in the desert can be partially offset by the dispersal of loading areas as widely as practicable.
- (4) *Navigation.* Flat desert terrain increases the effective range of line-of-sight radio aids to navigation for aircraft operating at low altitudes. Pathfinders can be employed effectively to guide aircraft and ground vehicles to objective areas and landing zones.
- (5) *Deception.* The difficulty of concealment and the increased capability for observation in the desert combine to create a necessity for the fullest use of deceptive tactics and procedures such as false airfield traffic patterns, deceptive reconnaissance, and similar devices.
- (6) *Resupply.* Aviation is particularly useful in accomplishing resupply over the great distances of desert operations. This results in a requirement for increased aircraft operations.
- (7) *Standing operating procedures.* Procedures should be established to cover contingencies such as the advisability of personnel remaining with or abandoning downed aircraft in friendly or enemy areas, search and rescue, and the recovery of damaged aircraft in the desert.

77. Mountains

a. General. The limited size and number of landing zones, decreased air density at higher altitudes, erratic weather conditions, and steep slopes which can prohibit or severely limit the use of vehicles other than aircraft are among the characteristics which influence plans and operations in mountains. Helicopter payloads may be reduced when landings or takeoffs are planned in less dense air at higher altitudes. Fixed wing aircraft usually operate from airstrips located in or adjacent to mountains. Natural concealment is plentiful for personnel and equipment as well as for ground vehicles and parked aircraft, both friendly and enemy. Although mountain streams may supply suffi-

cient water, practically all supplies must be moved into the area in which operations are conducted. Army aviation can be effectively employed in the supply and resupply of such mountain operations (FM 31-72).

b. Survival. In operations below 8,000 feet, survival is not the critical problem found in more extreme environments. Mountain operations above 8,000 feet are subject to subfreezing temperatures, especially at night, and personnel are generally less effective in the rarefied mountain air until they have completed an acclimatization period of about 14 days (FM 21-76). Army flight crews operating at mountain altitudes will require oxygen in accordance with AR 95-1.

c. Maintenance. Aircraft maintenance problems peculiar to mountain operations are primarily problems of supply and transportation. Abnormal engine wear will occur when helicopters are operated at maximum power settings for extended periods in order to overcome the decreased lift afforded by less dense mountain air. Normally, maintenance of aircraft and ground vehicles can best be conducted at sites adjoining the mountainous areas which can be supplied by surface transportation.

d. Special Equipment. Special personal equipment needed for mountain operations includes warm clothing and sturdy, slipproof footwear. Aircrews should carry with them on all flights sufficient personal equipment to enable them to survive and walk back to friendly lines in the event of forced landings.

e. Tactics. Mountain tactics are normal tactics modified to conform to mountain environments. Factors to be considered in making these modifications include the following:

- (1) *Day.* Mountain weather is relatively unpredictable. It is often advisable to prepare alternate plans of action for use in the event of unexpected weather changes. Mountain air affords excellent visibility on clear days. Aerial observers can cover large areas of mountainous terrain from helicopters or fixed wing aircraft. Air currents over and adjoining mountain ridges require great

caution on the part of flight crews. Downdrafts may cause aircraft to suddenly lose altitude and come dangerously close to mountain slopes.

- (2) *Night.* Mountainous terrain presents special considerations for night aircraft operations. Aircraft may operate effectively and safely singly or in pairs, but formation flights normally are undertaken only under optimum conditions. Ground observation is difficult even on moonlit nights because of heavy shadows, hence land navigation problems are magnified. Through the use of ground navigational aids and pathfinders, limited night operations by well-trained aviation and ground personnel are feasible.
- (3) *Loading areas.* It is usually possible to establish adequate loading areas in mountains, especially for helicopter operations. Large-scale operations may require the use of multiple loading areas. Where practicable, loading areas should be established in favorable terrain where aircraft can be refueled, and personnel and equipment picked up for delivery to landing zones located in less accessible terrain.
- (4) *Navigation.* Accurate maps are required for effective visual navigation in mountainous environments. Navigation by electronic means may be restricted by the line-of-sight characteristics of many such systems. Pathfinders can supply electronic or other navigation aids near the objective area for use during an operation.
- (5) *Deception.* Deceptive landings, traffic patterns, and similar devices, likely to be observed by the enemy from the excellent observation points provided by the mountains, can be very effective if carefully planned and executed.
- (6) *Resupply.* Army aircraft can accomplish resupply to troops located in mountains in a small fraction of the time necessary for other forms of transportation. Airdrop, low level

extraction, and airlanded deliveries can be made to otherwise virtually inaccessible points.

78. Jungles

a. General. The limited number of access roads, the presence of many natural features providing concealment, and rapid deterioration of many items of equipment are among the characteristics which influence plans and operations in the jungle. Dense jungles, usually sparsely inhabited, contain few roads or none at all which are suitable for military vehicles. Heavy jungle growth and extensive swampy areas make road construction difficult. Leafy overhead foliage can completely shield the jungle floor from observation from above. Occasional clearings afford helicopter landing areas; runways for fixed wing aircraft may have to be hacked out of the jungle (FM 31-30). Men and equipment required to prepare jungle landing pads may be lowered from hovering helicopters by approved rappelling techniques and other devices.

b. Survival. The jungle environment presents a far smaller threat to survival than deserts and cold weather areas. Navigation is often complicated by the many restrictions to long range observation from the jungle floor. A compass or a direction finding technique is necessary. Water can usually be located, but must be boiled or otherwise purified before drinking. There is usually sufficient edible vegetation, or other source of food, to support a man trained in jungle survival (FM 21-76).

c. Maintenance. Maintenance of all types of equipment in the jungle is complicated by the hot, humid atmosphere. Fabric, rubber, leather, and similar materials deteriorate rapidly. Unprotected metal surfaces will soon rust or corrode. Aircraft instruments and delicate communications equipment will become inoperative unless properly stored. Optical lenses can be damaged by fungus and other growths promoted by the jungle atmosphere. Appropriate publications should be consulted for details on the care of specific items of equipment.

d. Special Equipment. Electronic aids to navigation are particularly useful to aircrews because of the sameness of terrain which makes

up many jungle areas. Jungle survival kits should be carried in all aircraft being operated over these areas. Personal equipment should include insect repellent, mosquito nets, and other protective gear.

e. Tactics. Jungle tactics are normal tactics modified to conform to jungle environments. Factors to be considered in making these modifications include the following:

- (1) *Day.* Jungle weather is relatively predictable. Temperatures are high, differing little with the seasons of the year. Heavy rainfall is to be expected during the rainy seasons to which most jungles are subject. Most jungle terrain is very rugged, with deep valleys and steep ridges alternating. The combination of heavy rainfall and uneven terrain creates numerous rivers and streams. As jungles are located near the Equator, days and nights are about equal in length and vary little with the seasons of the year. Jungle fog and rain can be predicted with considerable accuracy and operations can be planned to take advantage of these weather factors for concealment of aircraft while en route to objective areas as well as while conducting other missions. Turbulence just above treetop level can be severe enough to interfere with nap-of-the-earth flying. Some jungles contain sufficient landing areas for rotary and fixed wing aircraft; others are so dense they require prior selection and/or preparation of landing areas for helicopters.
- (2) *Night.* Formation flying is very difficult over the jungle at night except under the very best conditions of moonlight, or when lights are used to maintain aircraft separation. Pathfinders and electronic navigation devices can increase the night capability of Army aircraft in jungle operations.
- (3) *Landing zones.* Security of jungle landing zones is very important, particularly when the enemy uses raids

as a means of obtaining supplies. Also, the jungle offers many opportunities for ambush of these zones if not protected by troops or located in secure areas.

- (4) *Navigation.* Tree-covered jungle areas, often extending for many miles, may contain little or nothing for use as visual navigational checkpoints. This is especially significant when flights are conducted at low levels without an aircraft being operated at a higher altitude to assist in navigation. Electronic aids are very useful in navigation over the jungle.
- (5) *Deception.* Personnel operating in the jungle can see aircraft flying overhead much more readily than persons flying overhead can see the jungle floor. Detailed reconnaissance of a given jungle area can alert the enemy to the fact that the area is of interest to the aerial observers. Deceptive reconnaissance of several areas can decrease the enemy's chances of predicting the location of the objective area or area of interest. All deceptive tactics which can be devised should be used in jungle operations.
- (6) *Resupply.* Aerial resupply in the jungle can be accomplished with less chance of enemy ambush or interference than resupply by use of surface transportation. Preselection of landing zones and loading areas and coordination with supplied units are especially important to prevent supplies falling into enemy hands.
- (7) *Standing operating procedures.* Procedures should be established to cover contingencies such as the advisability of personnel remaining with or abandoning downed aircraft in friendly or enemy areas, search and rescue, and and the recovery of damaged aircraft in the jungle.

79. Cold Weather

a. General. Snow and ice, high winds, extreme cold, variable visibility conditions, limited or nonexistent communications, and lack

of food and shelter are among the characteristics which influence plans and operations in the cold weather environment. As in most extremes of environment, cold areas contain little to support military operations. Many items of equipment deteriorate rapidly or otherwise become inoperative in extreme cold. It may be necessary to remove oil from aircraft after each flight, store it in a warmer place, and replace it before the next flight. Batteries for aircraft and ground vehicles often require similar treatment. Such operations take time. The increased time requirement for the performance of necessary functions must be considered in planning cold weather operations (FM 31-71).

b. Survival. When fuel for fire can be found, ice or snow can be melted for drinking water. Food is more likely to be a serious problem. A man not trained in survival will soon succumb to the extreme cold if deprived of facilities for protecting himself from the environment (FM 21-76).

c. Maintenance. Maintenance of all types of equipment becomes one of the most important, and most difficult, functions to be accomplished in cold weather. The greatest problem in maintaining aircraft will often be that of preparing them for flight. Once airborne, aircraft performance is likely to be very good because of the decrease in density altitude problems encountered in cold weather as compared to that at similar altitudes in deserts and other warm environments.

d. Special Equipment. Personnel require special clothing, gloves, and shelters in order to remain effective in the cold environment. Aircraft winterization kits may include protective covers and skis; special cold weather lubricants will be needed. Cold weather survival kits should be carried in all aircraft and ground vehicles operating in the cold weather environment.

e. Tactics. Cold weather tactics are normal tactics modified to conform to cold weather environments. Factors to be considered in making these modifications include the following:

- (1) *Day.* Snow-covered areas may offer a lack of contrast with the sky which completely obscures the natural hori-

zon, causing instrument flight conditions even on an otherwise clear day. Violent storms occur almost without warning, partly due to the scarcity of weather observation posts in most cold weather areas. Dark objects stand out clearly against a snow and ice background, and can be seen from a great distance during periods of good visibility. This advantage is available to both friendly and enemy observers. Severe storms prohibit most ground and flight operations, especially in mountain areas of the cold environment.

- (2) *Night.* Ground operations in cold weather areas may be more successfully conducted at night than during the day. This is because of the difficulty of concealment from enemy observers during daytime operations in periods of good visibility. Except during periods of optimum visibility, flight operations in polar areas will be limited largely to those in which electronic navigation aids can be employed.
- (3) *Landing zones.* Landing zones for helicopters and ski-equipped airplanes are plentiful in most cold areas. Frozen lakes provide good landing zones for both types of aircraft. Firm snow and ice also make good landing facilities. Hovering over loose snow should be held to an absolute minimum to avoid creating the blinding snowswirls which may be caused by helicopter downwash. Marker panels can enable both friendly and enemy observers to locate landing zones in snow and ice.
- (4) *Navigation.* Magnetic variation may render magnetic compasses useless in polar regions. Checkpoints, often not plentiful under the best conditions, may be made unrecognizable by snowstorms. Electronic aids to navigation will greatly increase Army aviation capabilities in cold environments.
- (5) *Deception.* Tracks left in the snow by personnel and vehicles can supply in-

formation to enemy observers. Deceptive tracks and installations may be used to confuse such observers. Deceptive reconnaissance and similar ruses, adapted to the cold weather environment, may be highly effective.

- (6) *Resupply*. Resupply requirements are magnified by the fact that polar areas afford little upon which a military force can survive. Track vehicles can operate over firm snow and ice, air-

craft can also be very useful in accomplishing resupply in the cold weather environment.

- (7) *Standing operating procedures*. Procedures should be established to cover contingencies such as the advisability of personnel remaining with or abandoning downed aircraft, search and rescue, and the recovery of damaged aircraft in cold weather.

Section V. NIGHT OPERATIONS

80. General

Aviation units must be capable of conducting assigned missions during periods of darkness. Although operations conducted at night increase problems of planning and control, advantages gained may favor night operations.

81. Planning and Coordination

a. Planning. Techniques involved in planning a night operation are similar to those for a daylight operation except that scheduling must be done far enough in advance to provide for detailed planning, reconnaissance, and coordination. Because of the problems of navigating at night, daylight reconnaissance should be accomplished to assist in selecting routes to and from the objective area. Use of aerial

photographs, side looking airborne radar, and infrared imagery will aid greatly in the planning of night operations. The capabilities of radars of the ASTA platoon's tracking and plotting teams to track aircraft engaged in night SLAR and IR operations should be considered in planning the operation. Use of these teams assists in assuring proper coverage of the target area as well as providing image interpreters with accurate traces of aircraft flight paths.

b. Coordination. Coordination must be established with the flight operations center to insure proper control of the flight. The flight operations center will in turn coordinate the mission with air defense units and Air Force air defense agencies.

CHAPTER 7

COMMUNICATIONS

Section I. GENERAL

82. Areas of Responsibility

a. The battalion commander is responsible for communications within the battalion, and for the battalion functioning as part of the next higher unit's communications system. The communications system provides the commander with parallel means of communications for efficient command, control, and administration of his unit.

b. The signal officer advises the commander and staff on matters pertaining to communications and supervises the battalion communications section. For detailed list of duties of the signal officer, see chapter 2.

c. The responsibility for communications among units is subject to the following general rules (FM 24-1):

- (1) The higher unit is responsible for establishing communications with the lower unit (including attached units).
- (2) A unit supporting another unit establishes communications with the supported unit.
- (3) Lateral communications between adjacent units are established and maintained by the unit on the left to the right unless directed otherwise by their common commander.

83. Signal Orders

a. *Signal Operations Instructions (SOI)*. Signal operation instructions are a type of combat

order issued for the technical control and coordination of communication within a command. They include items subject to frequent change covering codes and ciphers, radio call signs and frequencies, telephone directory, and visual and sound signals. Current items are listed in the index to the SOI. When authorized, the battalion signal officer prepares necessary extracts from the supported or assigned higher unit's SOI.

b. *Standing Signal Instructions (SSI)*. Standing signal instructions contain items of operational data not subject to frequent change and instructions for use of the SOI. They are prepared by a division signal officer, or higher echelon, and may be issued as a separate publication or consolidated in the SOI.

c. *Standing Operating Procedures (SOP)*. The communications portion of the battalion SOP is a set of instructions prescribing the manner in which routine jobs are accomplished within the unit in the observance of other instructions. In the battalion, the SOP is based on, and conforms to, the higher unit to which assigned or supporting. The battalion signal officer prepares the communications portion of the battalion SOP for the commander's approval. An SOP is particularly applicable to the communications section because many of its operations are the same, regardless of the employment. FM 24-16 contains a detailed discussion of signal orders.

Section II. AREA COMMUNICATIONS SYSTEM

84. General

The communications system of a field army is composed of the field army area communications system, the communications system organic to subordinate corps, communications

systems of divisions, and other communications facilities of units in the field army.

a. The field army area communications system is composed of signal centers interconnected by trunk circuits under centralized

control. Each signal center provides signal facilities required to support units and activities within its assigned area of responsibility (FM 11-86).

b. The corps signal communications system provides communications facilities from corps headquarters to corps troops and divisions. The corps communications system is provided in addition to the field army area system.

c. The division area communications system is composed of forward area signal centers and command signal centers interconnected through multichannel radio relay and field cable systems, radio, radio wire integration stations, and messenger service. FM 11-50 contains a detailed discussion of division communications operations.

85. Signal Center

A signal center is a grouping of signal communications facilities that are installed, operated, and maintained by Signal Corps units. Each signal center normally provides a communications center and messenger service, telephone and teletypewriter switching facility, circuit testing service, rerouting facility, radio/wire integration station, and radio and radio relay facilities. The two types of signal centers are command signal centers and area signal centers.

a. *Command signal centers* provide signal facilities for specific command headquarters and to designated units located in their immediate vicinity.

b. *Area signal centers* provide signal facilities within designated geographical areas, and serve all units within the area requiring such support.

86. Battalion Communications System

a. The aviation battalion is tied into the area communications system by the nearest signal center. The signal center is from either army, corps, or division, depending on the location. Normally, the wire team of the signal center

lays wire lines to the battalion switchboard, thereby providing circuits for communicating throughout the area system.

b. The battalion communications system is installed, operated, and maintained by the communications section which is organized into teams as discussed below:

- (1) The *communications chief* assists the signal officer by directly supervising the enlisted men of the section in the installation, operation, and maintenance of the battalion communications and electronic navigation systems.
- (2) *Radio and avionic electrical equipment repairmen* perform organizational maintenance by inspecting, testing, and repairing signal equipment assigned to the battalion. They maintain the authorized level of repair parts.
- (3) The *radio/teletypewriter team* installs and operates the radio/teletypewriter sets, receives and transmits messages, and establishes and posts station logs.
- (4) The *switchboard operator/field wireman team* installs, operates, and maintains the switchboard. This team, with the assistance of sections having organic telephones, installs the battalion wire system.
- (5) The *landing control operator team* provides ground controlled approach (GCA) radar assistance for letdown and landing approach of aircraft under instrument conditions. The team installs the GCA radar at the airfield.
- (6) The *control tower operator team* monitors and coordinates aircraft arrivals and departures on a 24-hour basis.
- (7) The *message center team* processes incoming and outgoing messages on a 24-hour basis.

Section III. MEANS OF COMMUNICATIONS

87. General

Signal communications include all means of conveying information of any kind from one

person or place to another except by direct conversation and mail. The means of communications available to the battalion are wire,

radio, messenger, and visual and sound signals. The composition of the means depends on the personnel, equipment, and transportation provided by the TOE and by the higher commander. The various means of communications have different capabilities and limitations. They are employed so that they complement each other. Entire dependence is never placed upon any one means.

88. Wire Communications

a. Wire is a principal means of communications and includes the use of field wire, wire-laying and recovery equipment, battery-operated and sound-powered telephones, switchboards, teletypewriters, and associated equipment. Wire is more secure than radio. Security is never assured when transmitting in the clear. The decision to establish wire communications depends on the need, the time available to install and use, security of wire against infiltrators, the capability to maintain, and the supply of wire on hand. Switchboards, such as the SB-22/PT, are used to increase the flexibility of wire systems and to reduce the number of lines needed. Party lines may be used to increase the capacity of switchboards. The battery-operated telephone set, TA-312/PT, is primarily used for this purpose.

b. The number of telephone messages that can be transmitted simultaneously over a wire is limited. For this reason, calls are kept brief; the telephone is reserved for occasions when there is need for discussion and relative speed. During critical periods, the telephone may be restricted to designated personnel.

c. A type wire system for the aviation battalion headquarters is shown in figure 2.

89. Radio Communications

a. *General.* Radio is a principal means of communications, and sufficient radios are provided to make radio communications available to all commanders and staff. Radio is less vulnerable to enemy fire than wire, but it is subject to interference from static, jamming, and other stations. Radio equipment issued to the battalion is vehicular mounted and can be operated by one man. This equipment consists of the AN/VRC-12 family of frequency-modulated (FM) voice radio sets which are used

in the battalion command net FM, and higher headquarters command nets. In addition, amplitude-modulated (AM) sets are provided for the warning broadcast net (AN/GRR-5), air traffic control nets (AN/VRC-24), and higher headquarters radio teletypewriter nets (AN/GRC-46 or AN/VRC-29, and AN/VSC-1). (Two AN/VSC-1, which are jeep mounted, are used in lieu of the AN/VRC-29 when the battalion headquarters of the airborne division must be airdropped.)

b. *Radio Communications Nets.* Radio nets within the aviation battalion headquarters and subordinate units are primarily for internal organizational communications and for communications between major units. Other radio equipments are provided for air warning systems and communications with echelons above battalion. FM and AM radios normally are used as an initial means of communication, particularly when other means such as wire or radio relay are unavailable or unsuitable. As other means become available, the use of radio may be curtailed and, as soon as possible, radio stations may be placed on standby or on listening silence as directed by the situation. Although radio nets are designated functionally (command, intelligence, and the like), traffic and other considerations frequently dictate that the nets be combined and used for more than one type of traffic.

(1) *Internal radio nets.* The battalion's internal radio nets are described below:

(a) *Battalion command net (FM voice).*

This net provides a direct channel of communications between the battalion commander and the commanders of units operating directly under battalion control. This net also links the battalion operations section with the company operations sections. Use of this net is restricted because of its large number of stations, but staff officers may monitor or operate in it if necessary.

(b) *Air traffic control net (VHF/UHF voice).* This net is located at the instrumented airfield in use. It provides necessary communications with aircraft by VHF and/or UHF.

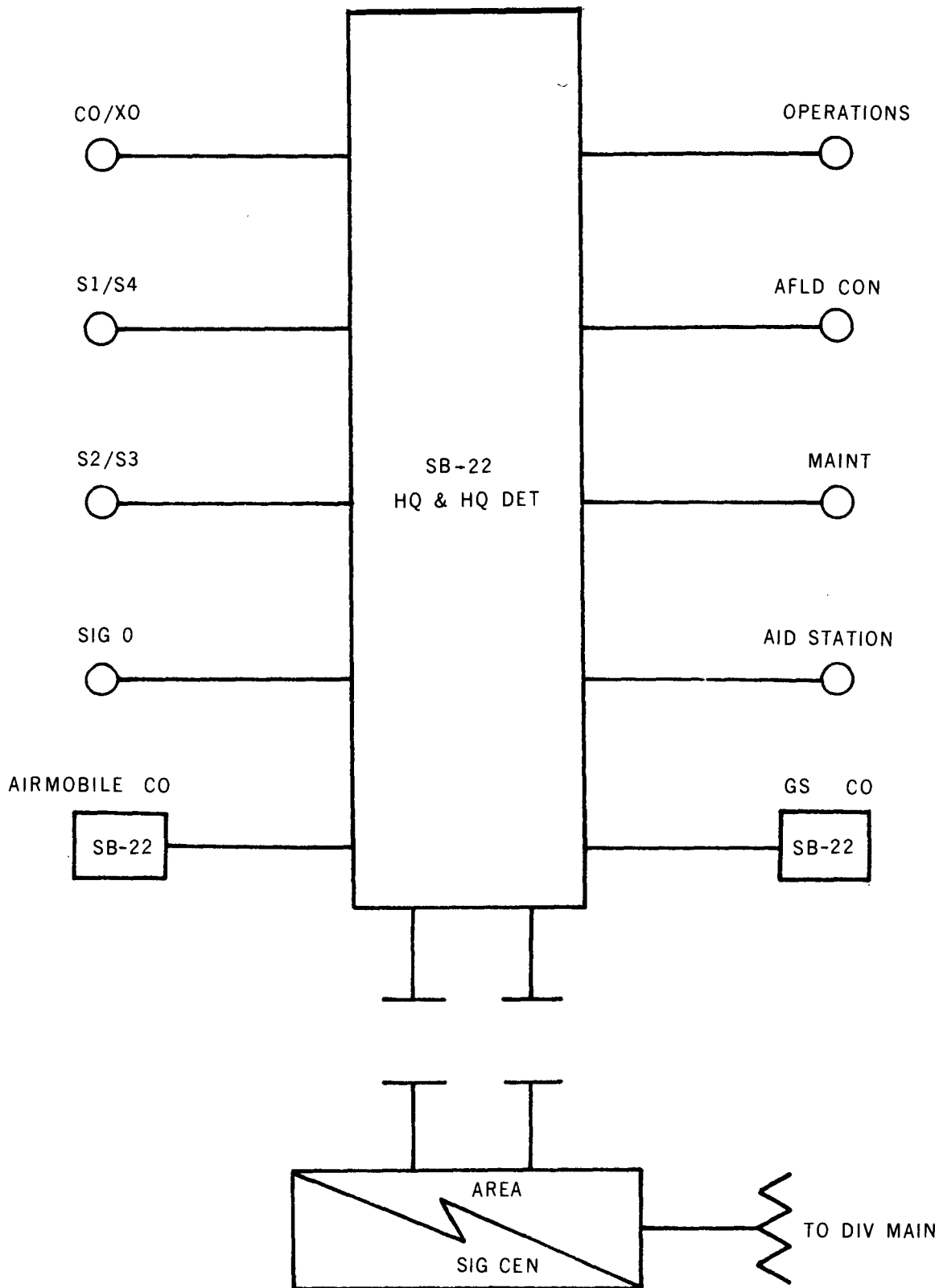


Figure 2. Type wire system, aviation battalion headquarters (TOE 1-56() and 1-76()).

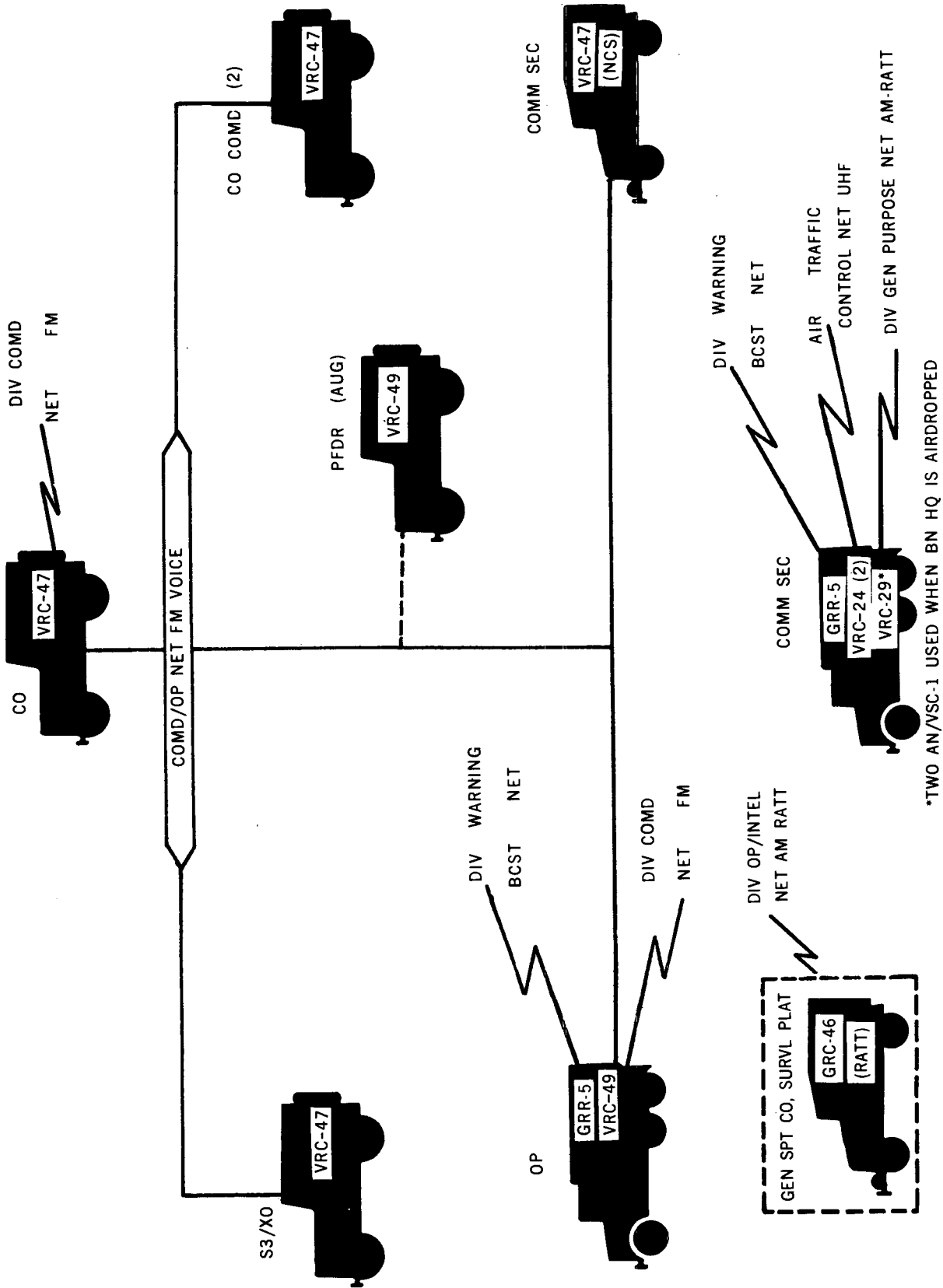


Figure 3. Type radio net, aviation battalion headquarters, airborne division (TOE 1-56 ()).

Figure 4. Type radio net aviation battalion headquarters, armored, infantry, or infantry (mechanized division (TOE 1-76()).

- (2) *External radio nets.* External radio nets in which the aviation battalion operates a station depends upon the type of battalion and its level of assignment. For a divisional aviation battalion, these nets are as follows:

- (a) *Division CG/command net (FM-voice).* This net is used by the division commander for command and operational control and to issue orders to his staff and to the commanders of certain immediate subordinate units.
- (b) *Operations-intelligence net (RATT No. 1).* This net is used to control operations and intelligence functions within the division. The divisional aviation battalion does *not* operate a station in this net. However, the surveillance platoon of the general support company does.
- (c) *General purpose net (RATT Net No. 3).* This net is used to transmit and receive all classifications of division type traffic within the battalion headquarters by use of radio teletypewriter (RATT). It includes all units which have a RATT capability.
- (d) *Division warning broadcast net (AM-voice).* This net is monitored by the operations section and the air traffic control section to receive information concerning CBR at-

tacks, nuclear strikes, and enemy air activity.

c. *Examples.* Type radio nets for the two types of aviation battalion headquarters are shown in figures 3 and 4.

90. Alternate Means of Communications

Various other means of communications will be used when the wire and/or radio means are not available or are not warranted for a specific message.

a. *Messenger.* Messenger, the most secure means of communications, is flexible and reliable. It is the only means available to the battalion for transmitting maps and documents. Messengers are used when security dictates or when they can deliver a message faster than it can be transmitted.

b. *Visual Signals.* Visual signals are transmitted by flags, lights, pyrotechnics, panels, and arm-and-hand signals. They are suitable for transmitting prearranged messages rapidly over short distances. Visual signals are easily misunderstood and are vulnerable to interception.

c. *Sound Signals.* Sound signals are transmitted by whistles, bugles, horns, gongs, klaxons, weapons, and other noise-making devices. They are used primarily to attract attention, transmit prearranged messages, and spread alarms, and are kept simple to prevent misunderstanding. They are a rapid means of communication over short distances.

Section IV. COMMUNICATIONS SECURITY

91. General

Communications security is the protection resulting from all measures designed and put into effect to prevent or delay unauthorized persons gaining information of military value from friendly communications sources. The three elements of communications security are physical, cryptographic, and transmission security. Each commander is responsible for communications security in his unit. Communications security orders and regulations must be understood and practiced by everyone concerned with communications. In the choice of

communications means, requirements for both security and speed must be considered. Regulations require that classified messages be encrypted when transmitted over electrical means. However, in actual combat operations, the commander or his authorized representatives may authorize classified messages other than TOP SECRET (TOP SECRET messages will NEVER be transmitted in the clear over electrical means, AR 380-51) to be sent in clear text when the two following conditions exist *at the same time*:

a. When there is insufficient time for encrypting, and

b. When the enemy will not have time to act upon the information contained in the message.

92. Physical Security

Physical security consists of the physical means taken to safeguard classified communications equipment and materials from access by unauthorized persons. Special attention must be given to SSI/SOI items and cryptomaterial, including their production, distribution, storage, and final disposition when superseded or no longer needed. A complete SOI item should never be taken forward of the battalion command post. SOI extracts carried in Army aircraft pertain only to material essential to that particular operation or flight. They are prepared so they can be destroyed easily. When an SOI item or extract is compromised, the fact must be reported and the item changed immediately. SOP prescribe emergency destruction of equipment and classified documents to prevent capture and enemy use. Classified material and equipment carried in aircraft will be destroyed if the aircraft is forced down and capture is imminent.

93. Cryptosecurity

Cryptosecurity is that component of com-

munication security which results from the provision of technically sound cryptosystems and their proper use (AR 380-40 and AR 380-41). Use of unauthorized cryptographic systems is strictly forbidden under the principle that a weak code or cipher is worse than none. Time spent in encrypting gives a high return in security. Cryptographic equipment is available for use with radio-teletypewriter systems to provide automatic enciphering and deciphering.

94. Transmission Security

Transmission security includes all measures to protect transmissions from interception, traffic analysis, and imitative deception. Radio is particularly susceptible to interception and resulting traffic analysis, direction finding, jamming, and deception by imitative transmissions. Radio is the most insecure means of communication. Prescribed radio-telephone procedure and authentication systems must be employed to protect radio transmissions. The authentication system of tactical air-ground communications is either that of the major command to which the aircraft are organic or that of the unit being supported. Message authentication is extremely important in aircraft radio relay operations and must be included in all SOI.

CHAPTER 8

AVIATION SAFETY

95. General

The purpose of the Army aviation safety effort is to accelerate accomplishment of the Army aviation mission through improved operation of aircraft. The effort includes the prevention of aircraft accidents and the minimization of the effects of accidents. Active participation of all personnel is necessary for an effective safety program.

96. Aviation Safety Program

The aviation safety officer administers the aviation safety program in accordance with Army Regulations of the 95-series and other appropriate publications such as AR 385-40 and DA Pam 95-9. The aviation safety program is a part of the overall Army safety program which is conducted to reduce and keep to a minimum accidental manpower and resultant monetary losses within the Army, thus providing more efficient utilization of resources and advancing the combat effectiveness of the Army. In administering the safety program, the aviation safety officer advises the commander on aviation safety matters and assists in maintaining an optimum relationship between accident-free aircraft operations and uncompromised mission accomplishment. The aviation safety program includes—

- a. Aviation safety training.
- b. Aircraft accident prevention plan.
- c. Preaccident plan.
- d. Aircraft accident prevention survey.

97. Aviation Safety Training

Safety training is conducted to cause each person concerned to become safety conscious to the extent of making continuous positive contributions to aviation safety. Crash rescue teams are trained in accordance with SR 95-50-1. Other personnel having specific duties

within the safety program are included in the battalion safety training plan. The aviation safety officer should insure that each individual understands the necessity of performing his particular duties in a manner which is safe to himself and to others. Thus, maintenance and control tower personnel, weather reporting personnel, and all others concerned are made aware that safety is their responsibility and is not reserved for the aviator alone. This state of awareness is promoted through individual contacts, in meetings, by the use of posters and printed materials, through incentive awards, and by other means which the aviation safety officer may devise.

98. The Aircraft Accident Prevention Plan

The aircraft accident prevention plan is prepared and maintained by the aviation safety officer. This plan is established with the aid of the Aviation Safety Planning Guide published and distributed by the United States Army Board for Aviation Accident Research (USABAAR). It is intended to assist commanders of all echelons in planning and establishing an effective aviation safety program. It outlines the essential tasks and functions needed for a successful safety program.

99. Preaccident Plan

The preaccident plan is prepared and maintained by the aviation safety officer. This plan includes provisions for the following:

a. *Crash Rescue Plan and Crash Alarm System.*

- (1) SR 95-50-1 contains details concerning the crash rescue plan. The crash rescue plan, included in the battalion SOP, discusses—
 - (a) Responsibility and duties of those concerned with crash rescue.
 - (b) Training requirements.

- (c) Organization.
 - (d) Communications system.
 - (e) Procedures as to notification and actions of all concerned.
- (2) The crash alarm system alerts the crash rescue team and others directly concerned with the crash rescue plan, including the operations officer, control tower and weather service personnel, and fire and ambulance teams.
- (3) The crash rescue team proceeds immediately to the scene of the accident with the priority mission of giving aid to personnel injured in the accident. The team is equipped to deal with conditions such as fire or the threat of fire and the necessity for forcible entry into deformed aircraft wreckage. Each member of the crash rescue team must thoroughly understand his duties and be proficient in performing them.

b. Aircraft Accident Investigation Board. The aircraft accident investigation board is appointed by the battalion commander and serves on a continuing basis. The board conducts investigations of aircraft accidents for the sole purpose of assembling information for use in preventing future accidents (AR 95-30 and DA Pam 95-5). Information obtained from Army aircraft accident investigations is of a privileged nature and is specifically prohibited from use for punitive purposes or for matters of liability, litigation, or contractor design competition (AR 95-30 and AR 385-40). See appendix III for details of agreement,

STANAG 3531, Investigation of Aircraft/Missile Accidents/Incidents.

c. Assignment of Responsibility for Technical Assistance to the Aircraft Accident Investigation Board. All possible technical assistance should be readily available to the aircraft accident investigation board. Personnel responsible for providing this technical assistance include the flight surgeon, provost marshal, chaplain, public information officer, signal officer, transportation officer, engineer, and others possessing knowledge and skills necessary to the efficient and thorough investigation of an aircraft accident. The aviation safety officer advises and assists the investigation board, but normally is not a member of the board.

100. The Aircraft Accident Prevention Survey

The aircraft accident prevention survey is conducted to reveal the existence of potential or actual problem areas in which the need for corrective action is indicated. The survey thoroughly covers each component of the organization's aviation facility including the airfield, operations office, weather office, terminal control facility, aircraft operation, pilot training, medical safety procedures, maintenance procedures, instrument approach facilities (if any), and the accident prevention program. A basic aircraft accident prevention survey has been prepared by the U.S. Army Board for Aviation Accident Research for use as a guide in conducting the survey. The survey should be conducted as often as necessary to assure that effective corrective action has been taken since the last survey, and to detect new problem areas. The aviation safety officer advises the commander of the findings of the survey.

CHAPTER 9

ADMINISTRATIVE MOVEMENTS

Section I. GENERAL

101. Introduction

An administrative movement is a movement in which troops and vehicles are arranged to expedite their movement and conserve time and energy when no enemy interference, except by air, is anticipated. Unlike tactical troop movements in which adaptation to the tactical situation is the primary consideration, administrative movements are concerned with the economical and efficient use of all facilities at the commander's disposal. Administrative movements by road in a counterinsurgency environment will be rare, especially during Phase II or III insurgency. Convoys must be prepared to conduct counterambush actions. Armed aerial

escort is an effective ambush deterrent and counterambush weapon.

102. Methods of Movement

Organic aircraft and ground vehicles normally are used in the accomplishment of aviation battalion movements. Additional vehicles may be attached for the move. Foot, rail, and water may also be used. Moves utilizing USAF aircraft are discussed in FM 101-10. Whatever the method or methods employed, detailed planning and control are necessary if the battalion is to reach its destination at the desired time and in an effective condition. See appendix II for information regarding the mobility of specific battalions using organic aircraft and ground vehicles.

Section II. PLANNING AND PREPARING FOR MOVEMENTS

103. Standing Operating Procedures

Many of the details relating to administrative movements, including the organization and assembly of units, control and coordination of the unit during movement, and deployment of units at the destination, should be included in the unit SOP. Consideration should be given to differences in speed of the types of aircraft and ground vehicles to be used. SOP should be revised as necessary to reflect experience gained from training for movements as well as from actual movements.

104. Planning

The planning of an administrative move follows logical channels starting with the determination of who and what is to be moved, what transportation means are available with which to make the move, the air and ground routes to

be used, and the destination of the move. These determinations are then expanded to include the organization of the personnel and equipment to be moved, and the best method of utilizing the available means. Resupply and other requirements imposed by the distance to be covered, characteristics of the route, and the nature of the destination are also matters to be considered.

105. Training

Training for administrative moves should cover planning and preparation for the move and the conduct of the move. In addition to increasing the ability of the battalion to conduct moves efficiently, the experience gained from these exercises provides data as to the rates of march for the air and ground columns, resupply requirements, and other factors for incorporation in the SOP.

106. Warning Order

Normally, the battalion commander will issue a warning order to alert the units of the expected movement to provide an opportunity for making advance preparations. The warning order should contain as much information concerning the departure time for each element, purpose of the operation, and the destination as circumstances and security procedures permit.

107. Route Reconnaissance Party

Organic aircraft may be used to conduct reconnaissance of the route being considered for the movement. This reconnaissance should include the reporting of information on the condition of the route and its suitability to the type of vehicles to be used, the distance to the destination, map errors, areas of possible concealment from which an ambush might be conducted, and the nature of the destination. It may be necessary for a ground party to conduct a more detailed investigation of specific conditions reported by aerial observers, or for an engineer unit to make repairs to bridges and roadways along the route. Aerial reconnaissance of the route being traveled should be continued throughout the movement to detect and report to the commander any change in conditions which may influence the conduct of the operation.

108. Quartering Party

The quartering party proceeds to the destination in advance of the battalion to determine the need for security measures and to arrange for the positioning of units of the battalion as they arrive in the area.

109. Trail Parties

a. Aerial. Aircraft participating in the movement are followed by an aerial trail party. This party includes maintenance personnel and

equipment to assist aircraft experiencing difficulty prior to or during takeoff and downed aircraft forced to leave formation because of mechanical difficulties en route. Where aircraft are divided into serials, possibly to allow for the speed differentials of different type aircraft, it may be necessary to provide a trail party for each serial.

b. Motor. The motor trail party is usually the last ground element to depart the vacated area. It follows the motor column to warn traffic approaching from the rear, to prevent straggling, and to make disposition of disabled vehicles. If the motor column is divided into serials, consideration is given to providing a trail party for each serial.

110. Column Organization

a. Aerial. The aerial column is organized primarily to insure an efficient move and to cause the aircraft to reach the destination at the desired time. Where aircraft involved are different types, and operate at different flight speeds, consideration should be given to dividing the aircraft into serials based on flight speeds. It may be advisable to use different flight routes for different type aircraft to simplify traffic problem such as those experienced when faster aircraft overtake slower aircraft. Consideration must also be given to traffic problems caused by the simultaneous arrival at the destination of more aircraft than can be efficiently landed and dispersed.

b. Motor. The motor column is organized primarily to insure an efficient move and to cause vehicles to reach the destination at the desired time. Vehicles can be kept in close column by adapting the march rate to the speed of the slowest element of the column. Vehicles can be divided into serials if it is desired to utilize their speed differentials by dispatching faster vehicles in the first serial to prevent their being delayed by slower vehicles.

Section III. MOTOR MOVEMENT

111. General

Aviation battalions are largely mobile through use of organic air and motor vehicles. That part of an aviation battalion not moved by

aircraft normally is moved by motor vehicles. The proportion of a movement accomplished by motor vehicles will vary with the type aircraft organic to the battalion and with any nonor-

ganic transportation made available for the move. The environment of operations influences the lift capability of aircraft and can impose a greater or lesser requirement than expected upon motor transport. In some cases aircraft can make two or more trips while motor vehicles make one trip, having the effect of increasing the mobility of the unit. FM 55-35 contains information concerning motor transport operations.

112. Nonorganic Transportation

Standing operating procedures will be established in advance to provide information needed for requesting nonorganic motor transportation. The SOP should contain a sample request for motor transportation and details as to the number of passengers or the tonnage and type of cargo to be transported. Usually, specific types of motor vehicles will be selected by the motor transport officer to meet the requirement. The battalion commander will be informed of the number and type of motor vehicles to be assigned, the regulating point, and the time at which vehicles will be placed under his control.

113. Supervision of the Column

The commander utilizes the superior range of vision made available by organic aircraft to aid in supervision of the column during movement. Supervision is accomplished through information relayed from aerial observers to the commander, or the commander may observe the column from the air and issue instructions by use of aircraft radio. Panels, signal lights, and similar devices will aid aerial observers in identifying ground vehicles.

Section IV. RAIL, AIR, AND WATER MOVEMENT

117. Rail

a. The unit being moved and the transportation agency are jointly responsible for the movement of troops and equipment by rail. Although aviation battalions are relatively mobile using organic aircraft and ground vehicles, rail is the most efficient method of accomplishing or supplementing some administrative moves. A move to a port of embarkation, preparatory to depart-

114. Time Interval

Time gap (time interval) is the interval, expressed in time, between the rear of any component of the column and the front of any following component as they pass a given point. This interval, adaptable to aircraft and ground vehicles, is especially useful in preventing excessive separation of elements of the column or a pileup of ground vehicles following too closely behind an element which is slowed or stopped by a terrain feature or other circumstance.

115. Halts

En route halts during administrative motor movements are usually scheduled in the movement order or in the SOP. All units halt simultaneously at the specified time or upon receipt of a prearranged signal. A similar procedure is used to resume the movement. Halts allow time for motor maintenance, rest, and feeding. Details may be posted to watch for hostile aircraft or other threats during halts, and vehicles will be dispersed as required by the situation.

116. Communications During the Move

Radio is usually the best means of communication during administrative motor movements in which the necessary equipment is available and security conditions permit. Visual signals by use of panels, flags, lights, arm-and-hand, and similar devices are often useful. Whistles, vehicle horns, and other audio signals are useful if distances between elements are not great. Messengers can deliver written or oral instructions during the move. Whatever the communications method used, the efficiency of administrative motor movements can be increased by prearrangement of signals in standing operating procedures.

ing the continental United States, is an example of a move in which rail can be the most efficient method of movement.

b. Preparations for the rail movement of an aviation battalion are coordinated with the local transportation agency. The unit being moved prepares and implements plans for the move in accordance with directives, and furnishes the transportation agency with details of the per-

sonnel and equipment to be moved. The transportation officer advises on matters relating to the rail movement including the transportation portion of the training program. During the training and alert phases, key personnel are trained in the execution of their duties during the movement, and all personnel and equipment are made ready for the move. The order directing the movement will specify the time and place at which the unit will entrain.

c. An advance party may be sent to the destination to make arrangements for the unloading of personnel and equipment and to establish assembly areas at the new location. While the train is en route, it is controlled and operated by the railroad personnel responsible. The troop commander, appointed by the battalion commander, is responsible for the provision of intermediate services, the safety and discipline of personnel, and the care of equipment while en route. Details on rail movements are contained in FM 101-5.

118. Air

a. The planning and preparation for movement of an aviation battalion by U.S. Air Force aircraft is similar to that conducted by other means. The unit being moved and the transportation agency are jointly responsible for the movement. In addition to the obvious advantage of speed of travel offered by aircraft, it may be possible for the transport aircraft to land at the location of the unit to be transported and move the unit directly to the ultimate destination. This procedure, when practicable, eliminates the move from the unit's location to the port of embarkation.

b. Training and other preparations for air movement should stress the importance of being ready to load personnel and equipment without delaying the transport aircraft assigned to ac-

complish the move. Preparations for the move must include dismantling equipment, as necessary, to conform to dimensions of the aircraft.

c. The flight will be conducted by Air Force personnel. The unit being moved is responsible for the loading, en route supervision, and unloading of personnel and equipment. Equipment to be airdropped from Air Force aircraft is delivered to the aircraft tailgate by the Army unit concerned and loaded aboard the aircraft by Air Force personnel. FM 57-35 contains information on airmobile operations.

119. Water

a. Water transport is often used to accomplish the movement of Army units to overseas destinations. The unit being moved and the transportation agency are jointly responsible for the movement. The U.S. Navy operates or supervises the operation of vessels used for such movements.

b. The battalion commander, in coordination with the transportation officer, prepares plans for loading and unloading personnel and equipment in accordance with established policies as contained in FM 101-5. Preparations for movement by water transportation must include necessary protective devices to prevent salt air or water damage to equipment, especially delicate communications and similar equipment.

c. While the ship is en route, it is controlled and operated by the shipping or Navy personnel. The unit being moved is responsible for the personnel and equipment being transported. As this type of transportation often consumes a relatively great amount of time, problems of troop morale and discipline may arise. The battalion commander is responsible for the safety and discipline of personnel, and the care of equipment while en route. Details on water movement are contained in FM 101-5.

CHAPTER 10

TRAINING

120. General

The broad training principles and policies to be used by all commanders are set forth in AR 350-1. Training in each unit and organization of the Army will be that training required for the effective performance of the mission. The battalion operations and training officer (S3) prepares the battalion training program and assists the commander in its implementation. Company commanders are responsible for training their companies in accordance with the battalion program. Although training is divided into several phases and categories, training in the battalion is a continuing process which moves from one phase to another without fixed starting or stopping points.

121. Training Publications

Army training programs (ATP) prescribe a general subject outline of training to be conducted by operational units and outline the minimum essential training for units and individuals. ATP also prescribe the subjects, the number of hours to be devoted to each subject, and essential study references and training aids which apply to the training of specific Army units. Smaller units, for which no ATP is available, may use applicable portions of ATP of larger units. Army subject schedules (ASubj-Scd) provide detailed guidance to instructors for the preparation of lesson plans and scheduling of periods of instruction for the conduct of training in a particular subject as outlined in ATP. FM 21-5 and FM 21-6 contain basic guidance for Army training. Other military publications available for training purposes are listed in DA Pam 310-3.

122. Individual Training

a. Individual training is that training which develops the skills and knowledge necessary to enable a soldier to participate as an effective member of a unit engaged in combat.

b. Individual training is provided in—

- (1) Basic combat training centers.
- (2) Advanced individual training centers.
- (3) Army schools.
- (4) Army units. This training, usually on-the-job training, is given in the unit when formal training in Army training centers and schools is not available. On-the-job training for the award of initial military occupational specialties (MOS) is presented only as a last possible resort. However, on-the-job training in the unit provides an invaluable method of developing and expanding skills in MOS obtained in Army schools and training centers. Maintenance personnel, for instance, can be given an opportunity to adapt their skills to the diversities of aviation maintenance in the operational environment provided by the aviation battalion and its elements. Officer and warrant officer personnel of the aviation battalion can maintain their aviator qualifications as well as their proficiency in both tactical and nontactical flying. Each individual officer must be competent to perform duties in aviation and in his career branch. Maintenance of this dual qualification demands the full energy and dedication of the individual. To this end, the officer must seek and take advantage of assignments and opportunities which contribute to his development as a professional Army officer. Information of the Army aviation officer career program is contained in AR 600-105.

123. Unit Training

a. Unit training stresses the consolidation of individual skills to achieve an effective unit capability. This training demonstrates the importance of the contribution made by each in-

dividual to the effectiveness of the unit. It is usually conducted in the field under conditions which the unit will be likely to encounter in combat.

b. Basic unit training is largely confined to company and smaller unit tactics. This training further develops all individual skills and adapts these skills to requirements of the unit.

c. Advanced unit training in the aviation battalion is usually conducted at the battalion level. It deals with the unit's tactical proficiency as demonstrated during training with supported units. Much of the advanced unit training should be conducted in bivouac under simulated tactical conditions. Particular attention will be given to—

- (1) Dispersion.
- (2) Concealment.
- (3) Local security.
- (4) CBR operations and protection measures.
- (5) Individual and unit protective measures against nuclear weapons effects.
- (6) Escape and evasion techniques for aircrew members.

124. Field Exercises and Maneuvers

Field exercises make up the last phase of the formal Army training program (FM 105-5). ATP 20-5 outlines the Army training program for field exercises and maneuvers. This phase provides opportunity for brigades and larger units and supporting forces to exercise as a fully integrated combined arms team. Field exercises are conducted under simulated war conditions in which troops and armament of one side are actually present, while those of the other side may be imaginary. In field maneuvers, troops and armament of both sides are present in whole or in part. In this training, the aviation battalion or its subordinate elements are employed in support of the various type units with which the battalion is expected to operate under tactical conditions. Field exercises and maneuvers reflect all functions performed by the unit and require maximum teamwork. They will include—

a. Performance of all normal mission capabilities.

b. Signal communications, including transmission security and alternate means of communications.

c. Liaison.

d. Intelligence stressing the accurate, prompt, and complete reporting of information.

e. Evasion and escape.

f. Individual and unit protective and defensive measures (active and passive), to include use of demolitions, camouflage and concealment, and airfield perimeter defense.

g. Unit action against air, airborne, and ground attack including means of combating guerrillas and infiltrators.

h. Route reconnaissance.

i. March discipline and convoy organization and regulation.

j. Organizational maintenance.

k. Bivouac procedures, including field messing and sanitation.

l. Emergency medical treatment for the sick and injured, and mass evacuation.

m. Supply procedures and leadership, cadre, and key specialist training.

n. An evaluation and critique aimed at the correction of all deficiencies noted during the exercises.

125. Operational Readiness Training

Operational readiness training is that training undertaken by units which have completed the formal phases of training and which are assigned the responsibility for maintaining the highest possible state of combat proficiency in order to accomplish operational missions. This training employs a simulated plan of operation, of the same or greater complexity than an actual plan of operation, to provide exercises in unit response to operational orders. The objectives of operational readiness training are to—

a. Correct deficiencies discovered in previous training.

b. Develop and maintain, with all means available, a satisfactory state of readiness for operational missions to include special operations in various environments.

c. Prepare to deploy to the field for extended combat operations on short notice.

126. Training with Other Units

Training with other units provides training for the aviation battalion, or its elements, in the operational support role. During such training, supported units gain experience in utilizing and adapting to aviation support. Such integrated training is particularly suited to Army aviation units whose elements are usually decentralized and placed in support of other units. Training with host country units in counter-insurgency airmobile operations is necessary

for both the indigenous forces and the supporting aviation units.

127. Army Training Tests (ATT)

Army training tests provide guidance for testing to evaluate the ability of a unit to perform its assigned mission, and to evaluate the ability of the soldier to perform the minimum skills requisite to success in battle. After completion of an ATP, an ATT is administered to determine the extent to which the ATP was effective. Each ATT is related directly to an ATP or to a portion of an ATP.

APPENDIX I

REFERENCES

AR 95-series	Army Aviation.
AR 310-1	Military Publications—General Policies.
AR 310-3	DA Publications—Preparation, Coordination, and Approval.
AR 320-5	Dictionary of United States Army Terms.
AR 320-50	Authorized Abbreviations, and Brevity Codes.
AR 350-1	Army Training.
AR 350-5	Military Education and Service Schools.
AR 385-10	Army Safety Program.
AR 385-40	Accident Reporting and Records.
AR 700-945	Safeguarding Weapons and Ammunition.
AR 750-1	Maintenance Concepts.
AR 750-8	Command Maintenance Management Inspections.
ATP 20-5	Army Training Program for Field Exercises and Maneuvers.
DA Pam 95-5	Handbook for Aircraft Accident Investigators.
DA Pam 95-9	U.S. Army Aviation Accident Prevention Pamphlet.
DA Pam 108-1	Index of Army Motion Pictures, Filmstrips, Slides, Tapes, and Phono-Recordings.
DA Pam 310-series	Military Publications Indexes.
FM 1-5	Army Aviation Organizations and Employment.
FM 1-60	Army Aviation Air Traffic Operations—Tactical.
FM 1-100	Army Aviation.
FM 3-12	Operational Aspects of Radiological Defense.
FM 8-15	Division Medical Service, Infantry, Airborne, Mechanized, and Armored Divisions.
FM 8-16	Medical Service, Field Army.
FM 8-35	Transportation of the Sick and Wounded.
FM 8-50	Bandaging and Splinting.
FM 9-30	Maintenance Battalion, Division Support Command.
FM 11-50	Signal Battalion, Armored, Mechanized, and Infantry Divisions.
FM 11-86	Combat Area Signal Battalion, Army.
FM 19-25	Military Police Traffic Control.
FM 21-5	Military Training Management.
FM 21-6	Techniques of Military Instruction.
FM 21-10	Military Sanitation.
FM 21-11	First Aid for Soldiers.
FM 21-30	Military Symbols.
FM 21-40	Small Unit Procedures in Chemical, Biological, and Radiological (CBR) Operations.
FM 21-41	Soldier's Handbook for Chemical and Biological Operations and Nuclear Warfare.
FM 21-76	Survival.

FM 21-77	Evasion and Escape.
FM 24-1	Tactical Communications Doctrine.
FM 24-16	Signal Orders, Records and Reports.
FM 29-22	Maintenance Operations in the Field Army.
FM 31-16	Counter guerrilla Operations.
FM 31-22	U.S. Army Counterinsurgency Forces.
FM 31-25	Desert Operations.
FM 31-30	Jungle Operations.
FM 31-71	Northern Operations.
FM 31-72	Mountain Operations.
FM 41-10	Civil Affairs Operations.
FM 54-2	Division Logistics and the Support Command.
FM 55-10	Transportation Movements, Services, and Units in the Field Army.
FM 55-35	Motor Transportation: Conduct of Operations and Transportation Service Support.
FM 55-45	Aircraft Maintenance Service in Units in the Field Army.
FM 57-35	Airmobile Operations.
FM 100-5	Field Service Regulations—Operations.
FM 101-10-2	Staff Officers Field Manual; Organizational, Technical and Logistical Data—Extracts of TOE.
FM 105-5	Maneuver Control.
SR 95-50-1	Procedures for Aircraft Crash Fire-Fighting and Rescue.
TM 3-220	Chemical, Biological, and Radiological (CBR) Decontamination.

APPENDIX II

SUGGESTED OUTLINE FOR AN SOP

CLASSIFICATION

Headquarters
Location
Date

STANDING OPERATING PROCEDURES

I. GENERAL

- A. Purpose.
A statement of the general coverage and uses of the SOP.
- B. Conformity.
Instructions as to the requirement for conformity in the procedures of subordinate and supporting units.
- C. Organization.
When applicable, designations of habitual task organizations.
- D. Combat Orders, Reports, and Distribution.
General information common to all combat orders and reports, which is applicable to all units of the publishing headquarters.

II. COORDINATION OF TACTICAL OPERATIONS

Detailed procedures are covered in appropriate SOP annexes. This paragraph in the body of the SOP contains information of general applicability, together with references to the appropriate annexes.

- A. Command and Control.
 - 1. Command Post.
 - a. Reporting Procedures.
 - b. Headquarters—include composition, movement, control and succession of command.
 - 2. Liaison and Coordination.
 - 3. Signal Communication—include reestablishment of a signal facilities after nuclear attack.
- B. Intelligence.
 - 1. Prisoners of War.
 - 2. Communications and Electronic Intelligence.
 - 3. Map Instructions—covering availability, requisition, and distribution.
 - 4. Weather—include sources of information and distribution.
 - 5. Air Reconnaissance—include instruction on availability and requests.
 - 6. Counterreconnaissance.
 - 7. Attached and Supporting Intelligence Specialists.

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- C. Coordinating Agencies—include all organizations for coordination tactical operations, other than fire support.
- D. Procedures.
 - 1. Fire Support Coordination
 - a. Procedures and Means of Coordination.
 - b. Coordination Measures.
 - c. Air Defense.
 - 2. Regulation and Coordination of Use of the Airspace Over the Combat Zone.
 - 3. Regulation and Coordination—of the use of that portion of the electro-magnetic spectrum of primary interest to the tactical commander.
 - 4. Coordination—of tactical operations with administrative procedures.
- E. Techniques.
Operations Orders, Reports, and Distribution.
- F. Special Considerations.
 - 1. Actions to Minimize Effects of Nuclear Attack.
 - 2. Tactical Cover and Deception.
 - 3. Army Aviation—List items from policies of higher headquarters on operation, use, and control.
 - 4. Night Operations.
 - 5. Combat Surveillance.
 - 6. Mobility—include movement by motor, rail, water, and air.
 - 7. Psychological Operation—include support thereof.
 - 8. Special Operations.
 - 9. Rear Area Security—include antiguerrilla action.

III. COORDINATION OF ADMINISTRATIVE SUPPORT OPERATIONS

Only key operational procedures of general applicability and covered in the body of the SOP. Most of the subheadings below will refer to an annex for detailed coverage.

- A. Coordinating Agencies. All organic or special organizations to coordinate administrative support.
- B. Procedures. Control and coordination of administrative procedures with tactical operations.
- C. Techniques.
Administrative Orders, Reports and Distribution.
Orders and reports pertaining to administrative support units.
- D. Detailed Considerations.
 - 1. Logistics.
 - a. Coordination of Logistics Activities Within Each Administrative Agency.
 - b. Materiel and Services.
 - (1) Supply. Class I, II and IV, III and IIIA, V, and Water (may be included as annexes by technical services).

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- (2) Services (Including Maintenance). May be in annexes by technical services.
- c. Medical Evacuation and Hospitalization.
- 2. Personnel.
 - a. Maintenance of Unit Strength.
 - (1) Strength, Records, and Reports. An Effective Unit Disaster, Casualty, and Personnel Status Reporting procedure should be included.
 - (2) Replacements.
 - b. Personnel Management.
 - (1) Personnel Procedures. Personnel policies and activities used to implement the personnel management program.
 - (2) Prisoners of War and Civilian Internees. All normal phases of processing, handling, accounting, and evacuation other than interrogation will be covered.
 - c. Development and Maintenance of Morale.
 - (1) Morale and Personnel Services. This includes authorized absences (pass, R&R, leave), decorations and awards, mail, PX supplies, Finance, Chaplain, and Special Services.
 - (2) Graves Registration Service. Policy on recovery and disposition of dead—friendly or enemy.
 - d. Maintenance of Discipline, Law and Order. Troop conduct and appearance, handling of stragglers and other disciplinary cases.
 - e. Headquarters Management. Applicable only to the CP of the publishing headquarters.
 - f. Miscellaneous. Matters not covered in above.
- 3. Area Damage Control. All possible disasters should be considered. Coordination must be made with Rear Area Security Plans.
- 4. Public information and Community Relations. Policies made to improve military-civilian relations.

Commanding

(SOP)

- Annexes: (To be included as appropriate when material is voluminous or is used by relatively few members of the command. At lower units, two or more annexes may be combined.)
- A—International Operations and Movement of the Headquarters
 - B—Prisoners of War, Captured Documents and Materiel
 - C—Air and Ground Reconnaissance

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D—Counterintelligence
E—Fire Support Coordination
F—Actions to Minimize Effects of Nuclear Attack
G—Army Aviation
H—Chemical and Biological Warfare
I—Movements
J—Unconventional Warfare
K—Psychological Warfare
L—Rear Area Security
M—Chemical
N—Engineer
O—Medical
P—Aircraft Maintenance and Supply
Q—Evasion and Escape
R—Downed Aircraft Procedures, Search and Rescue
S—Aircraft Accident Investigation Plan
T—Crash Rescue Plan

CLASSIFICATION

APPENDIX III

STANAG 3531

NATO—UNCLASSIFIED

Original English/French translation.

STANAG 3531

DETAILS OF AGREEMENT (DofA)
INVESTIGATION OF AIRCRAFT/MISSILE
ACCIDENTS/INCIDENTS

PART I

Definitions

1. For the purpose of this STANAG, the term aircraft/missile accident shall apply to any occurrence classified as an aircraft/missile accident or incident by any of the Nations involved.
2. For the purpose of this STANAG, the term "air force" shall include the Air Forces, Naval and Air Forces and Army Air Forces of the Nations concerned and includes a reference to the appropriate Air Force, Naval or Army authorities and 'Air Force Law' shall include the law relating to such forces.
3. This STANAG shall apply only to accidents and incidents which occur to military aircraft/missiles.
4. For the purpose of this STANAG, the term "Nation involved" shall include the Nation owning the aircraft/missile, the Nation of whose territory (including territorial waters or ship) the accident(s) occurs, and the Nation to whom the crew(s) belongs.
5. For the purpose of this STANAG, the term "aircraft" shall include free balloons, gliders, airships and flying machines, whether manned or unmanned. The term "missile" shall include air-to-air, surface-to-surface, air-to-surface and surface-to-air missiles.
6. For the purpose of this STANAG, the term "aircraft/missile accident/incident" shall include accidents/incidents as defined in Part I, paragraph 1, which involve projectiles of all types, whether guided or unguided and free falling, rocket propelled, or fired from a cannon.
7. For the purpose of this STANAG, the "Operating Nation" shall be the Nation which owns the aircraft/missile or the Nation under whose direct control the aircraft/missile was being flown or operated at the time of the accident or incident.

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8. For the purpose of this STANAG, an Aircraft/Missile Accident Safety Investigation means a systematic and thorough analysis, research and/or careful examination to disclose all relevant facts, conditions and circumstances associated with or surrounding each aircraft/missile accident, conducted for the sole purpose of accident prevention, quite separate and apart from, and in addition to, any investigation which may be required by the laws of the Nations involved.

9. An Aircraft/Missile Accident Safety Investigation Committee, or in the case of aircraft/missile accidents involving equipment, facilities and/or personnel of two or more member Nations, a Combined Aircraft/Missile Accident Safety Investigation Committee, is a body comprised of such investigators, medical and technical advisors, as may be deemed necessary by the country or each of the countries involved, appointed for the purpose of carrying out an aircraft/missile accident safety investigation as defined in paragraph 8.

PART II

Policies

1. Each Nation may conduct its own accident safety investigation, the proceedings and conclusions of which shall be privileged. Where permissible, representatives of other Nations involved will be invited to attend.

2. Whereas some NATO nations, either by law or procedure, follow a policy of permitting the results of investigations into aircraft/missile accidents/incidents to be used in disciplinary or legal proceedings and for the determination of the responsibility for claims, the reports and conclusions reached by Aircraft/Missile Accident Safety Investigation Committees shall be treated as privileged and shall not, either wholly or in part, be used as evidence for the purposes of collateral investigations, claims or litigation, without the agreement in each separate case of the Government of the Nations involved.

3. A separate investigation for the purpose of ascertaining the civil responsibilities may be conducted by the appropriate authorities of the country of occurrence in accordance with the national laws of the country of occurrence or other agreement ratified by the Governments concerned. If an investigation is required for air force disciplinary reasons, it shall be the responsibility of the individual Nations concerned to conduct such an investigation under their own air force laws. Each of these last two investigations shall be separate from the Aircraft/Missile Accident Safety Investigation.

4. When an airfield or launch site situated in allied territory is occupied by forces of one NATO Nation and an accident or incident occurs to one of its aircraft/missiles within the limits of such an airfield or launch site, the air force authorities of that Nation shall be responsible for all measures to be taken.

5. Member Nations shall cooperate in investigations of other member Nations into an aircraft/missile accident or incident, and wherever possible,

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shall release relevant information which does not compromise security or conflict with practices regarding privilege.

Communications with the Press

6. National authorities of the country of occurrence shall respect the security restrictions which are normally imposed by the Operating Nation with respect to the issue of statements to the press concerning accidents which occur within their territory. No statement shall be issued without the concurrence of the Operating Nation.

Implementation of Agreement

7. Each member country shall implement this agreement in appropriate regulations and directions, to include the following additional actions:

- a. Establish procedures for notifying countries involved of the accident or incident and safeguarding wreckage in an undisturbed condition until the Safety Investigators of each Nation involved have released the wreckage.
- b. Where there is a reason to suspect the presence of explosive or other hazardous conditions in a missile accident, the member Nation is to establish a safety zone around the location pending further information from, or handing over to, the Operating Nation.
- c. Notify other member Nations of the names of the national agencies to be informed when equipment, facilities and/or personnel of that country are involved in an aircraft/missile accident or incident with the equipment, facilities and/or personnel of another country.
- d. Designate an authority to be advised when a requirement arises for a combined aircraft/missile accident investigation.

PART III

Investigation Procedures

1. General

- a. When an accident or incident occurs involving aircraft/missiles of one or more Nations on another Nation's territory or ship, the air force or other military authorities of the country of occurrence shall:
 - (i) Render all assistance necessary to injured crews and/or remove fatalities.
 - (ii) Provide a medical doctor, preferably with specialist aeromedical qualifications, to initiate any necessary medical investigation in accordance with STANAG 3318 (Edition No. 2)—“Medical Aspects of Aircraft Accident Investigation” and subsequently, where necessary, to assist the medical member or advisor to the Aircraft Accident Investigating Committee.
 - (iii) Request national and/or local authorities to keep the scene of the accident guarded and untouched until the appropriate Safety Accident Investigation Committee has been notified. If the wreckage must be moved for technical or social reasons, or to prevent further damage to the aircraft/missile, a reconstruc-

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tion must be made by means of photographs, drawings, maps, and witnesses.

- (iv) Report the accident in accordance with the existing procedures of the country of occurrence. The country of occurrence will take immediate steps to notify the nearest representative of the allied authorities of the countries concerned (military attaches, nearest air force, army or naval base, etc.). The Nation operating the aircraft/missile shall be invited to send an accident safety investigation committee.
- (v) Report to the Operating Nation's Authorities the names (where known) and the condition of injured persons, giving their location and the seriousness of their injuries.

b. National Safety Investigations

- (i) The safety investigation shall be the responsibility of the Nation operating the aircraft/missile concerned except that when the Operating Nation does not wish to investigate an accident then the responsibility for investigation shall rest with the Nation on whose territory the accident occurred. An officer (or officers) of the country of occurrence may, with the concurrence of both countries, be attached to the Operating Nation's investigating committee as an official assistant or observer.
- (ii) The investigations shall be initiated by the Operating Nation's authorities, after they have notified the appropriate air force staff of the country of occurrence and the appropriate national headquarters.
- (iii) The medical aspects of aircraft accident investigation shall be in accordance with STANAG 3318 (Edition No. 2)— "Medical Aspects of Aircraft Accident Investigation."
- (iv) An officer of the country of occurrence shall be sent immediately to the scene of the accident to facilitate the work of the investigating committee by collecting in advance all possible written statements and other evidence and, where required, to assist that committee.

c. Disposal of Fatalities

In the case of fatal accidents:

- (i) An officer detailed by the country of occurrence shall take all necessary legal steps required by the local civilian authorities.
- (ii) The local military authorities shall accord the honours prescribed by their own regulations to fatalities.
- (iii) Fatalities shall be treated in accordance with the desires of the Nation(s) concerned.

Combined Safety Investigations

2. The following rules shall apply:

- a. All aircraft/missile accidents or incidents involving equipment, facilities and/or personnel of two or more member Nations shall normally

be investigated by a Combined Aircraft/Missile Accident Safety Investigation Committee. If there is an indication that equipment, facilities and/or personnel of any other member Nation were contributory causes to the accident, that member Nation shall be notified and invited to participate in a combined investigation.

b. Composition of Combined Safety Investigation Committee

- (i) Combined Aircraft/Missile Accident Safety Investigation Committees shall be comprised of such investigators and technical advisers as may be deemed necessary by each of the countries involved.
- (ii) Upon notification of an aircraft/missile accident falling within the category in para 2a above, the Nations affected shall advise the Headquarters of the air force or missile arm of the country of occurrence of the names of the officers comprising their investigating group and will designate a senior member.
- (iii) The investigators and technical advisers of member Nations involved shall be formed into one investigating committee, working under the unified direction of a coordinating group.
- (iv) The coordinating group for the investigation shall be composed of the senior member of each Nation's investigating group.
- (v) The most senior member of the Group appointed by the Operating Nation shall become President of the Combined Safety Investigation Committee.
- (vi) When aircraft/missiles of two Nations are involved in accidents over the territory of a third Nation, the President of the Combined Accident Investigation Committee shall be determined by agreement among the Nations involved.
- (vii) In cases where the Committee is unable to present an unanimous conclusion as to the prime and contributory causes of the accident, each national point of view shall be stated.

c. Coordination of Investigating Efforts

The coordinating group shall be responsible for overall direction of the investigation, shall organize the investigating committee into specialized sub-committees, as necessary, and shall conduct the investigation in accordance with the procedures normally used by the Operating Nation, in so far as this is possible under the terms of this STANAG.

d. Reporting

- (i) The investigating committee shall report its combined findings in a report which shall include the following:
 - (a) Factual circumstances;
 - (b) Investigation and analysis;
 - (c) Findings and conclusions;
 - (d) Recommendations.

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To this report will be attached such statements or exhibits as will make the findings more meaningful and comprehensive. The Chief Investigator of each Nation involved will indicate on the report his concurrence or nonconcurrence. This combined report may be separate or rendered apart from any other report required by pertinent regulations of the individual nations.

- (ii) When one nation involved cannot directly participate in a combined investigation, that Nation shall have the right to request and receive copies of all the original reports and conclusions of the combined investigating committee. In the event combined investigation is not conducted because a nation involved has declined to participate, copies of the Aircraft/Missile Investigation Report prepared under paragraph 1(b)(i) above shall not be made available if privileged status precludes release of such reports.

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By Order of the Secretary of the Army:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

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NG: Units—Avn Bn (3); Avn Co (3); Avn Det/Team (3).

USAR: Units—Avn Bn (3); Avn Co (3); Avn Det/Team (3).

For explanation of abbreviations used, see AR 320-50.